

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

VLSI TECHNOLOGY LLC *
*
VS. * CIVIL ACTION NO. W-21-CV-57
*
INTEL CORPORATION * March 1, 2021

BEFORE THE HONORABLE ALAN D ALBRIGHT, JUDGE PRESIDING
JURY TRIAL PROCEEDINGS
VOLUME 6 OF 7

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08:04 1 (March 1, 2021, 8:04 a.m.)

08:04 2 THE COURT: Good morning. You may be seated.

08:06 3 Okay. Let's go ahead and proceed.

08:06 4 Mr. Chu, what would you like to take up this morning?

08:06 5 MR. CHU: Allocation of time.

08:06 6 THE COURT: Okay.

08:06 7 MR. CHU: At the very end of the day on Friday, we had
08:06 8 almost five hours left of the 15. We had 4 hours, 42 minutes.
08:07 9 And then Your Honor, after excusing the jury, said you want to
08:07 10 finish today. And the way you counted it, there would be a
08:07 11 total of four hours for both sides.

08:07 12 We had been efficient and stayed on budget, and we were
08:07 13 about one hour ahead of the other side. We thought that the
08:07 14 reasonable split is that we would have two and a half hours and
08:07 15 the other side would have one and a half. I don't think the
08:07 16 Court --

08:07 17 THE COURT: Mr. Chu, let me tell you what the problem is,
08:07 18 and I'm sympathetic to what you're saying. And I'm even
08:07 19 willing to do some 60/40 type allocation.

08:07 20 All I care about is, since I don't know what you're going
08:07 21 to put on in rebuttal, I don't want to find ourselves in a
08:07 22 situation where it's 2:30 and you say on rebuttal we rest or
08:08 23 we're done, and the defendant doesn't get an adequate amount of
08:08 24 time to deal with your rebuttal.

08:08 25 So I'm open to you -- and Mr. Lee I'll hear from of

08:08 1 course, but I'm open to a slight -- plaintiff gets 60 to 40
08:08 2 because of that, but I'm going to make sure that -- what is
08:08 3 your suggestion to guarantee that Intel has sufficient time to
08:08 4 cross-examine any witnesses you do on rebuttal?

08:08 5 MR. CHU: So here's the total time, from 8:30 to 2:30 is
08:08 6 six hours, two and a half in the afternoon, three and a half in
08:08 7 the morning. Subtract an hour for lunch, that's five hours.
08:08 8 Subtract 15 minutes for one break in the morning, that's 4:45.

08:08 9 THE COURT: Okay.

08:08 10 MR. CHU: If you say the total time for both sides split
08:09 11 in a way that you think is fair and we are held to that, so
08:09 12 whether it's 60/40 or two and a half hours, one and a half
08:09 13 hours, we are held to our allocated time, then we will finish
08:09 14 with plenty of time before 2:30. And I think that's the way to
08:09 15 govern it.

08:09 16 THE COURT: Mr. Lee?

08:09 17 MR. LEE: Your Honor, we thought that the proposal you
08:09 18 made yesterday, or at least Evan communicated to us, was very
08:09 19 fair. It gives us time to finish our case, and then they can
08:09 20 start their rebuttal case.

08:09 21 We had a disagreement about what should come in, but we
08:09 22 understand Your Honor's ruling, and particularly if it's going
08:09 23 to be that broad, the time constraint makes sense. And the
08:09 24 50/50 split once they start rebuttal makes sense to us.

08:09 25 We have to finish Dr. Grunwald. We have Mr. Huston,

08:09 1 who'll be about an hour and ten on direct, and then we will
08:10 2 rest at that point in time.

08:10 3 THE COURT: Start over. Let me just write -- I need to
08:10 4 write down -- write down the math. And -- well, let me start
08:10 5 over and say this: What I was trying to do yesterday was
08:10 6 give -- to balance these -- these are the competing interests,
08:10 7 I want to put on the record.

08:10 8 Competing interests are this: I know I'm shortchanging
08:10 9 you from what we originally had, the total number of hours. I
08:10 10 get that. In part I'm doing that, Mr. Lee, to accommodate your
08:10 11 ability to get out of here because of the conflict of that. So
08:10 12 mindful of that -- but I also do, if we can, I would like to
08:10 13 get finished today just because it's been a long trial. So I
08:10 14 have that factor.

08:10 15 I am aware of the fact that Intel has used slightly more
08:10 16 time. It's an hour, but it's more time than the plaintiff has
08:10 17 used. I wanted to make sure that -- I wanted to give you
08:11 18 enough warning that from the -- in this case the plaintiff's
08:11 19 perspective, as they were doing crosses of your witnesses
08:11 20 today, that they were saving sufficient time to, if they wanted
08:11 21 to put on rebuttal case, put on a rebuttal case.

08:11 22 So I am also, though -- you know, I'm not totally against
08:11 23 if we need to do this to allow the plaintiff to get in what
08:11 24 they want to get in and to make sure Intel has an opportunity
08:11 25 to do a cross, which I'm trying to balance, trying to get all

08:11 1 the planes in on time, I would be -- I would even consider
08:11 2 going until 3:00 -- read my deal, which I think is like --
08:11 3 it's a long -- my concern is it's long. It's 40 pages, I
08:11 4 think, and I tend to read about a minute a page. So I've
08:12 5 allocated -- whatever number of pages the charge is, you'll see
08:12 6 for me it winds up being about that many minutes.

08:12 7 I'm also though totally happy to go to 6:00 today to
08:12 8 finish the trial and give everyone enough time to do what you
08:12 9 need to get done.

08:12 10 So I'm also perfectly happy, for example, another
08:12 11 suggestion I might have is that I give Mr. Chu a cut-off of
08:12 12 2:30 to get his -- to do whatever they're going to do on their
08:12 13 rebuttal case, which would save 30 minutes for defendant on
08:12 14 that final witness to finish, and then we would start at 3:00.

08:12 15 I'm just trying to make this as fair as I can and let you
08:12 16 all get in your evidence and finish today.

08:12 17 MR. LEE: Your Honor, they actually have two witnesses on
08:12 18 rebuttal.

08:12 19 THE COURT: No. I get that. I understand. I'm saying
08:12 20 I'm trying to get -- make sure everyone gets to put on their
08:13 21 evidence and do their cross.

08:13 22 MR. LEE: Can I make a suggestion that may help?

08:13 23 THE COURT: Absolutely.

08:13 24 MR. LEE: I mean, we have to finish with Dr. Grunwald this
08:13 25 morning, then we have Mr. Huston and then we'll rest. Is it

08:13 1 possible that what we do is come back to Your Honor at that
08:13 2 point, Mr. Chu and I, at a break and just say here's how much
08:13 3 time's left, then you tell us how to split it?

08:13 4 THE COURT: That's absolutely fine with me. I'll have
08:13 5 more information then. I just didn't want the plaintiff -- I
08:13 6 wanted the plaintiff -- the plaintiff needs to know they need
08:13 7 to be reasonable in terms of their cross.

08:13 8 And what I may also do -- now you know -- I'll say this
08:13 9 going in, I am a big let the lawyers do what they want to do.
08:13 10 It's your time.

08:13 11 But I think what I'm going to do for the witnesses -- I
08:13 12 don't want this to seem unfair, but I'm letting you know now --
08:13 13 you get a direct, you get a cross, you get a redirect, and you
08:13 14 get a recross and then we're done with that witness as opposed
08:13 15 to what I have been doing, which is let you all go on because
08:13 16 it was your time.

08:13 17 So keep that in mind as well, that you're only going to
08:14 18 get one second chance to put someone on.

08:14 19 MR. LEE: And, Your Honor, there are some issues with
08:14 20 Mr. Chandler, who's one of the two, and what he can testify to.
08:14 21 Your Honor may recall, we had a Daubert on him, which you
08:14 22 granted in part. That actually may cut the time down too,
08:14 23 because there are at least three major issues, which we could
08:14 24 address whenever Your Honor wants.

08:14 25 THE COURT: Well, let's do it now.

08:14 1 MR. LEE: Okay. Mr. Mueller's going to address them for
08:14 2 us.

08:14 3 MR. CHU: Could I --

08:14 4 THE COURT: Mr. Chu, you can say anything you'd like.

08:14 5 MR. CHU: We would be far more comfortable if Your Honor
08:14 6 would just make a call and allocate of the four hours, because
08:14 7 we should be done by 2:30 if the total for both sides is four
08:14 8 hours. And we can plan for that, and we'll live within those
08:14 9 time limits.

08:14 10 The proposal that Your Honor had suggested on Sunday would
08:14 11 allow them to run out the clock.

08:14 12 THE COURT: Okay. Mr. Chu, I agree with that too. It's
08:14 13 like Justice Breyer once said to both sides -- Mr. Lee might
08:15 14 have been the lawyer he said it to -- but he said, you know,
08:15 15 the really hard thing is I listen to you, and I think you're
08:15 16 right; I listen to him, I think he's right, and what do I do?

08:15 17 I'm going to give the plaintiff two and a half hours. I'm
08:15 18 going to give the defendant two hours, and we're going to
08:15 19 finish by 3 o'clock.

08:15 20 MR. CHU: Thank you. And we can go to that issue. We
08:15 21 have a couple of issues too. I can bring up one issue very
08:15 22 quickly.

08:15 23 THE COURT: And you all have 15 minutes to get everything,
08:15 24 you know, done.

08:15 25 MR. CHU: Last week we had proposed playing some Delaware

08:15 1 depositions on willful blindness. Several witnesses, who were
08:15 2 Intel engineers, said Intel has a policy that we're not allowed
08:15 3 to look at patents.

08:15 4 And then Your Honor said, were these 30(b)(6) depositions?
08:15 5 Mr. Lee got up instantly and said, no, they're not 30(b)(6)
08:16 6 depositions.

08:16 7 And from the transcript, Your Honor had said, well, if
08:16 8 they're 30(b)(6) depositions, it seemed like you were going to
08:16 9 allow them; but if they're not 30(b)(6) depositions, you ruled
08:16 10 that they were out. They are 30(b)(6) depositions.

08:16 11 THE COURT: Mr. Lee?

08:16 12 MR. LEE: Your Honor, they were not 30(b)(6) depositions
08:16 13 on this topic. These were engineers who were 30(b)(6)s on
08:16 14 technical issues but not on this topic.

08:16 15 THE COURT: Let me make clear on the record. I'm only --
08:16 16 I would only allow it in if Intel had offered -- if the
08:16 17 question was: Put up someone from Intel as a 30(b)(6) witness
08:16 18 to describe the policy, you know, with respect to -- I mean, it
08:16 19 needs to be on this topic, not just that Witness X was there to
08:16 20 tell you how the widget worked as the corporate representative
08:16 21 and you asked them this and he also said that during the depo.

08:16 22 MR. HATTENBACH: Your Honor, the topics that they were
08:16 23 designated by Intel for included the subject matter on which we
08:16 24 wanted to play the deposition testimony.

08:17 25 So as an example, all facts relating to Intel's decision

08:17 1 to develop the accused features, including the considerations
08:17 2 that factored into those decisions, all facts and circumstances
08:17 3 relating to non-infringing alternatives.

08:17 4 Those sorts of things we believe firmly encompass
08:17 5 corporate policy that forbade affirmatively them from even
08:17 6 looking at patents as part of that decision-making process.

08:17 7 And it was represented to you explicitly that they were
08:17 8 not 30(b)(6) witnesses, not that they weren't 30(b)(6)
08:17 9 witnesses on a particular topic. And that was just incorrect.

08:17 10 THE COURT: Mr. Lee?

08:17 11 MR. LEE: Your Honor, they were not 30(b)(6)s on the
08:17 12 question of this patent policy. That's correct. It remains
08:17 13 correct. They have not cited to you in their papers a single
08:17 14 reference.

08:17 15 The other thing is this is way too late in the day.

08:17 16 THE COURT: No. I -- I'm going to exclude those
08:17 17 witnesses.

08:17 18 What's the next issue?

08:18 19 Or I'm not going to allow -- I'm not going to exclude
08:18 20 them. I'm not going to permit them to testify.

08:18 21 Next topic?

08:18 22 MR. MUELLER: Yes, Your Honor. We had the issue Mr. Lee
08:18 23 referenced with respect to Mr. Chandler who's one of the two
08:18 24 witnesses testifying today. So we do have one discrete issue
08:18 25 with Mr. Huston, who will testify this morning. And

08:18 1 Mr. Chandler wouldn't testify till the afternoon. So I think
08:18 2 it would be more efficient to just address --

08:18 3 THE COURT: I'm going to do both of them right now.

08:18 4 MR. MUELLER: Okay.

08:18 5 THE COURT: So Mr. Mueller jumped up before you did, so
08:18 6 I'm going to let him.

08:18 7 MR. MUELLER: May I pass this up, Your Honor?

08:18 8 THE COURT: Yes. Of course.

08:18 9 MR. MUELLER: Judge, you recall that at Daubert you
08:18 10 excluded a portion of Mr. Chandler's opinions related to
08:18 11 holdout and expressions with respect to the character of Intel
08:18 12 and so on.

08:18 13 The slides that you have before you, Your Honor, we think
08:18 14 contravene that decision. And I'll direct your attention, if I
08:18 15 could, Your Honor, to Slide 6. --

08:18 16 THE COURT: Are these the closing argument slides?

08:19 17 MR. MUELLER: No. These are for Mr. Chandler. These are
08:19 18 for Mr. Chandler.

08:19 19 THE COURT: Okay.

08:19 20 MR. MUELLER: 6.19, there's a fork in the road you can
08:19 21 see. And the clear implication is that Intel is forcing the
08:19 22 patent owner to risk long and expensive litigation or take less
08:19 23 money than patents are worth. This is another way of
08:19 24 expressing the holdout arguments.

08:19 25 THE COURT: You know, I'm not going to allow that slide.

08:19 1 MR. MUELLER: The second problem we have, Your Honor, with
08:19 2 Mr. Chandler's slides, and also the exhibits that we have
08:19 3 received in connection with Mr. Chandler, if you turn to the --
08:19 4 6.21, Your Honor.

08:19 5 THE COURT: Oh, and -- and by the way, it would be the --
08:19 6 there's a next slide as well that has an X on it. I would not
08:19 7 permit that one either.

08:19 8 MR. MUELLER: Thank you, Your Honor.

08:19 9 If you look at, Your Honor, Slide 6.21, there's -- this is
08:19 10 one example of slides referring to various settlement
08:19 11 agreements.

08:19 12 We've received disclosures of settlement agreements
08:19 13 ranging from an antitrust case to various patent cases, and we
08:20 14 think there's at least three distinct grounds on which these
08:20 15 agreements should be precluded.

08:20 16 No. 1, Mr. Chandler is not saying that any of these are
08:20 17 comparable license agreements. Quite the contrary. He's
08:20 18 explicitly saying that they're not comparable.

08:20 19 Now, he says that they are, quote, "informative." And so
08:20 20 what we take this to mean is he's going to try to show the jury
08:20 21 these large numbers from settlement agreements, despite
08:20 22 explicitly acknowledging that they're not comparable to the
08:20 23 hypothetical negotiation.

08:20 24 THE COURT: You can -- I -- I've given Intel great liberty
08:20 25 in what they've done in the other direction. I'm going to

08:20 1 allow -- you can certainly point that on cross.

08:20 2 MR. MUELLER: Okay. And the last thing, Your Honor, is
08:20 3 there's some slides that refer to --

08:20 4 THE COURT: So let me protect the record. I'm overruling
08:20 5 your objection. I will allow VLSI to use that slide.

08:20 6 MR. MUELLER: Understood, Your Honor.

08:20 7 The last issue is -- may I just address, Your Honor, if I
08:20 8 could just lodge a running objection -- rather than getting up
08:20 9 and objecting over and over again -- but a running objection to
08:20 10 those agreements?

08:21 11 THE COURT: You will need to object when -- on the record
08:21 12 at least once. You don't have -- you can just say, however you
08:21 13 want to say it, "Your Honor, I -- you know, I raise the
08:21 14 objection I raised this morning." And I'll put that on the
08:21 15 record. I want to make sure -- I'm just trying to make sure I
08:21 16 protect your record. And then, yes, you may have your running
08:21 17 objection.

08:21 18 MR. MUELLER: Thank you, Your Honor. I appreciate that.

08:21 19 The last thing is there's a couple of slides here that
08:21 20 refer to Dr. Sullivan's opinions. And we think this is an
08:21 21 attempt to have Mr. Chandler corroborate Dr. Sullivan's
08:21 22 opinions, including with -- in respects in which Mr. Chandler
08:21 23 himself did not offer opinions.

08:21 24 And so an example of this would be No. 13 -- 6.13,
08:21 25 hypothetical negotiation versus real-world negotiations. He's

08:21 1 referring to this information gap. These are issues that came
08:21 2 up in the context of Dr. Sullivan that Dr. Chandler -- or
08:21 3 Mr. Chandler did not opine on. We just ask that he be held to
08:21 4 his opinions.

08:21 5 THE COURT: Well, here's what I'm going to order, and I
08:22 6 have no way of knowing how you all do this. I'm not going to
08:22 7 allow VLSI to represent to Mr. Chandler an opinion was made if
08:22 8 it wasn't made. If it wasn't made, then they can't represent
08:22 9 that.

08:22 10 I don't know what they're going to say. If you -- if when
08:22 11 they say, Dr. Sullivan said this, you can object and the
08:22 12 plaintiff should have some way of being able to show me in the
08:22 13 record or something where he did say it, or it was in his
08:22 14 report or whatever it is.

08:22 15 Anything they are -- but they are -- VLSI is certainly
08:22 16 able to cross on anything that they can establish that the jury
08:23 17 did hear from Dr. Sullivan.

08:23 18 MR. MUELLER: Understood, Your Honor.

08:23 19 So just to make sure I understand Your Honor's rulings on
08:23 20 the other issues, they can refer to the settlement agreements
08:23 21 but cannot make any of these holdout arguments.

08:23 22 THE COURT: They cannot make any argument that is
08:23 23 somewhat -- here's what I care about. They cannot say that
08:23 24 Intel -- the expense of litigation was a factor in the decision
08:23 25 making here.

08:23 1 MR. MUELLER: Okay. Thank you, Your Honor. I appreciate
08:23 2 it.

08:23 3 THE COURT: And that's -- that, I do not think is
08:23 4 appropriate. Under -- again, with always being -- saying if
08:23 5 somehow you open the door, you know, and they can show me that
08:23 6 this gentleman says something where it becomes fair to raise
08:23 7 that because of something he said, if they -- and let me add
08:23 8 one more thing.

08:23 9 I don't believe that anyone gets to, on cross, open a
08:23 10 door. And what I mean by this in this situation is VLSI
08:23 11 doesn't get to ask a question of Mr. Chandler, he answers it,
08:24 12 and then he says, oh, he's opened the door.

08:24 13 No. In my opinion, he just answered your question that
08:24 14 you decided to put to him. You can't open the door for -- to
08:24 15 bring in something when you're on your feet.

08:24 16 MR. MUELLER: Okay.

08:24 17 THE COURT: But if -- as far as I'm concerned, that -- the
08:24 18 idea of avoiding litigation costs is not an appropriate subject
08:24 19 for the jury to consider.

08:24 20 MR. MUELLER: Thank you, Your Honor.

08:24 21 THE COURT: Yes, sir.

08:24 22 MR. HEINRICH: Good morning, Your Honor.

08:24 23 THE COURT: Good morning.

08:24 24 MR. HEINRICH: So we have just one objection to one
08:24 25 discrete demonstrative from Mr. Huston.

08:24 1 THE COURT: Okay.

08:24 2 MR. HEINRICH: And let's see. Well, my --

08:24 3 THE COURT: Is it that it's too big?

08:24 4 MR. HEINRICH: Well, no. My ELMO skills are not great.

08:24 5 So this is --

08:24 6 THE COURT: You can try just handing it to me.

08:24 7 MR. HEINRICH: This is Mr. Huston's final demonstrative.

08:24 8 And it's just factually and legally inappropriate. He's trying

08:25 9 to suggest that the asserted patents are this motel and you can

08:25 10 license or rent this room.

08:25 11 THE COURT: Go ahead.

08:25 12 MR. HEINRICH: He's trying to suggest that the patents are

08:25 13 this motel, you can rent -- take a license --

08:25 14 THE COURT: You know, I -- I, actually, in a case, had

08:25 15 someone do exactly this on the other side to me, and I dealt

08:25 16 with it pretty well on cross.

08:25 17 MR. HEINRICH: Okay.

08:25 18 THE COURT: And so -- so I'm assuming that the quality of

08:25 19 lawyers on your side, you can -- you can deal with this. If I

08:25 20 could, every lawyer in front of me is way better than I was as

08:25 21 a trial lawyer. I'm sure you can -- you can handle it.

08:25 22 MR. HEINRICH: Okay. Thank you, Your Honor.

08:25 23 THE COURT: I'll overrule your objection.

08:25 24 Is there anything else we need to take up?

08:25 25 MR. LEE: Not for Intel, Your Honor.

08:25 1 THE COURT: Mr. Chu?

08:25 2 MR. CHU: Not this morning.

08:25 3 THE COURT: Is that a warning?

08:25 4 MR. CHU: No, no, no. I know that we collectively, and
08:25 5 the Court in particular, wants the jury --

08:26 6 THE COURT: We do. So I'm going to go, and if you'll get
08:26 7 the jury in, we will bring the jury in just as soon as we can
08:26 8 get them over here.

08:26 9 THE BAILIFF: All rise.

08:26 10 (Recess taken from 8:26 to 8:28.)

08:28 11 THE BAILIFF: All rise.

08:28 12 THE COURT: Please remain standing for the jury.

08:28 13 (The jury entered the courtroom at 8:28.)

08:29 14 THE COURT: Thank you. You may be seated.

08:29 15 MR. CHU: May I begin?

08:29 16 THE COURT: Yes, sir.

08:29 17 MR. CHU: Thank you very much, Your Honor.

08:29 18 Good morning, ladies and gentlemen.

08:29 19 CROSS-EXAMINATION

08:29 20 BY MR. CHU:

08:29 21 Q. Good morning, Dr. Grunwald.

08:29 22 A. Good morning.

08:29 23 Q. I'd like to call up Page 165 of your expert report
08:29 24 and show the jury a figure. And at the bottom -- I'm going to
08:29 25 blow that up -- and in particular, you expressed an opinion in

08:29 1 the box that is called the "GV3 controller & VID Stepper"; is
08:30 2 that right?

08:30 3 A. Yes.

08:30 4 Q. I'm going to be asking you a question just about that
08:30 5 box because you were pointing to that as a matter of your
08:30 6 opinion.

08:30 7 A. Yes.

08:30 8 Q. When your deposition was taken, you were asked
08:30 9 questions about it. And is the following correct: That does
08:30 10 not have a computer program having instructions; is that
08:30 11 correct? Yes or no.

08:30 12 A. The GV3 stepper, I think I -- that's correct. Yes.

08:30 13 Q. Thank you. I'm going to a different subject now.

08:30 14 You would agree that it's very important to follow the
08:30 15 correct legal principles in forming your opinion; is that
08:30 16 correct?

08:30 17 A. Yes.

08:30 18 Q. When you started on your analysis for your expert
08:31 19 report on validity of the '759 patent, you did not assume
08:31 20 validity or invalidity -- let me ask it again.

08:31 21 When you started your analysis for your expert report on
08:31 22 validity of the '759 patent, you did not presume validity or
08:31 23 invalidity; is that correct? Yes or no.

08:31 24 A. I assumed that the patent --

08:31 25 Q. Sir, can you answer the question yes or no?

08:31 1 A. I don't think I can answer it just yes or no.

08:31 2 Q. You did not presume validity or invalidity of the
08:31 3 '759 patent when you were working on your expert report; is
08:32 4 that correct? Yes or no.

08:32 5 A. I don't think I can answer that fully with a -- with
08:32 6 just a yes or no, if I'm understanding the question correctly.

08:32 7 Q. I'm going to go to another subject, sir.

08:32 8 Dr. Conte offered an opinion about the closest
08:32 9 non-infringing alternative; is that correct?

08:32 10 A. Yes.

08:32 11 Q. You criticized him, correct? Can you answer that yes
08:32 12 or no?

08:32 13 A. Yes.

08:32 14 Q. Yes, you did criticize Dr. Conte on his opinion about
08:32 15 the closest non-infringing alternative; is that correct?

08:32 16 A. Yes. That's correct.

08:32 17 Q. You did not offer your own opinion on the closest
08:33 18 non-infringing alternative; is that correct? Yes or no.

08:33 19 A. Yes. It's correct.

08:33 20 Q. Dr. Conte also testified about comparison testing,
08:33 21 correct?

08:33 22 A. Yes. I think so.

08:33 23 Q. And what he was comparing was HWP autonomous, which
08:33 24 for shorthand we also called Speed Shift; is that correct?

08:33 25 A. Yes.

08:33 1 Q. That was part of it?

08:33 2 A. Yes.

08:33 3 Q. And he was comparing that to the legacy speed
08:33 4 changes, correct?

08:33 5 A. The -- yes.

08:33 6 Q. And you criticized Dr. Conte's comparison of Speed
08:34 7 Shift with legacy speed changes, correct?

08:34 8 A. Yes.

08:34 9 Q. Professor Conte's comparison was based on tests that
08:34 10 Intel had done on the exact same comparison, correct?

08:34 11 A. Yes. The tests were labeled that. Yes.

08:34 12 Q. In your criticism you said that Professor Conte,
08:34 13 instead of comparing Speed Shift to legacy, was that he should
08:34 14 have compared it to what you called "true legacy," correct?

08:34 15 A. Yes.

08:34 16 Q. You did not do that comparison between Speed Shift
08:35 17 and what you called true legacy; is that correct?

08:35 18 A. That's correct.

08:35 19 Q. You never bothered to ask anyone to run that test for
08:35 20 you; is that correct?

08:35 21 A. Yes. That's correct.

08:35 22 Q. You knew that Intel has a very substantial
08:35 23 performance testing group; is that correct?

08:35 24 A. Yes. That's right.

08:35 25 Q. You also had contact with Dr. Rotem, who we heard

08:35 1 from last week, correct?

08:35 2 A. Yes. I spoke to him twice.

08:35 3 Q. And you also had contact with Dan Borkowski, who we
08:35 4 heard from last week; is that correct?

08:35 5 A. Yes. I think I spoke to him twice too.

08:35 6 Q. And you could have asked Dr. Rotem to do the test but
08:35 7 you did not do so, correct?

08:35 8 A. That's correct.

08:35 9 Q. You could have asked Dan Borkowski to do the test,
08:35 10 but you did not do so, correct?

08:35 11 A. Yes. I did not ask him.

08:35 12 Q. You could have asked a small fraction of the large
08:36 13 Intel performance testing group to do the test, but you did not
08:36 14 do so; is that correct?

08:36 15 A. Yes. That's correct.

08:36 16 Q. Thank you very much, Doctor.

08:36 17 THE COURT: Mr. Chu?

08:36 18 MR. CHU: Just for the record, the first figure I
08:36 19 mentioned is from Exhibit D-267 at 11.

08:36 20 THE COURT: Thank you, sir.

08:36 21 MR. CHU: Thank you, Doctor.

22 THE COURT: Redirect?

23 MS. SOOTER: Thank you, Your Honor.

24 If we could go to Slide 71 of Professor Grunwald's slide
25 deck, please.

REDIRECT EXAMINATION

BY MS. SOOTER:

Q. Professor Grunwald, you were just asked about the GV3 stepper at the bottom of this figure that you see here. Do you remember that?

A. Yes.

Q. Can you please explain to us whether or not that is what you're pointing to as the programmable clock controller in Yonah?

A. No. That's not the only part of the programmable clock controller.

Q. What are you pointing to as a programmable clock controller in Yonah?

A. So it combines all of the things shown on this slide plus microcode that is used to provide results to this slide, plus microcode that manipulates the GV3 stepper, which I think is what the next slide describes.

Q. So we would have to look at more than just that to see the programmable clock controller?

A. Yes.

Q. Professor Grunwald, you were just asked a number of questions about the testing of Speed Shift as compared to SpeedStep. Do you remember that?

A. Yes.

Q. Is it possible to measure the value of the '759

08:38 1 patent by looking at Intel's products?

08:38 2 A. No. Because even in the alleged products, the legacy
08:38 3 mode is actually implemented by the same hardware. And the --
08:38 4 so it would be using that same hardware to test sort of two
08:38 5 different modes of operation.

08:38 6 Q. Now, I believe that, regarding this testing that you
08:38 7 were just asked about, you testified earlier that the
08:38 8 plaintiff's expert, Dr. Annavaram, used the wrong tool. Can
08:38 9 you please remind us what you meant by that?

08:38 10 A. Dr. Annavaram used the Fox2 Power Model tool. So
08:38 11 that -- or I'm sorry, not power model, power debugging tool.
08:38 12 So it's used to determine whether the P-code --

08:38 13 MR. CHU: Excuse me, Doctor. And I apologize, counsel.
08:38 14 This is beyond the scope of cross.

08:39 15 THE COURT: I believe the question was when you asked him
08:39 16 about something, wasn't it?

08:39 17 MS. SOOTER: Yes, Your Honor.

08:39 18 THE COURT: Then --

08:39 19 MR. CHU: I did not ask questions about Dr. Annavaram's
08:39 20 testing or the Fox2 tool. I asked questions about work that
08:39 21 Professor Conte did.

08:39 22 THE COURT: Could you ask the question again?

08:39 23 MS. SOOTER: Sure. I'll ask the question.

08:39 24 BY MS. SOOTER:

08:39 25 Q. Professor Grunwald, would it have made sense for you

08:39 1 to go to Intel to ask them to run the Fox2 tests?

08:39 2 A. No.

08:39 3 Q. Why not?

08:39 4 A. Wrong tool for the wrong job, I think was the phrase
08:39 5 I used earlier.

08:39 6 Q. What do you mean by that?

08:39 7 A. The Fox2 tool is not used for measuring power or
08:39 8 performance. It's for debugging code.

08:39 9 Q. Do you remember that Mr. Chu asked you some questions
08:39 10 on Friday afternoon about what the Patent Office knew when it
08:40 11 decided to grant the '759 patent?

08:40 12 A. Yes.

08:40 13 Q. And specifically Mr. Chu asked you about something
08:40 14 called SpeedStep. Do you remember that?

08:40 15 A. Yes. I do.

08:40 16 Q. Let's look at the document Mr. Chu showed you.

08:40 17 MS. SOOTER: If we could bring up PTX-8-A, please.

08:40 18 BY MS. SOOTER:

08:40 19 Q. This is the prosecution history for the '759 patent,
08:40 20 and I'd like to turn to the page Mr. Chu showed you.

08:40 21 MS. SOOTER: Page 68, please.

08:40 22 BY MS. SOOTER:

08:40 23 Q. Now, do you remember Mr. Chu asking you questions
08:40 24 about this article?

08:40 25 A. Yes.

08:40 1 Q. Which processors is this article about?

08:40 2 A. It's about, as it says, the Mobile Intel Pentium III
08:40 3 Processor Family. Those are a unit processor or a single-core
08:40 4 family.

08:40 5 Q. Thank you.

08:40 6 And why is that significant, that there is a single core
08:40 7 on these processors?

08:40 8 A. Because a central part of the '759 patent is that it
08:41 9 deals with multiple master devices.

08:41 10 Q. And what does VLSI map to a master device?

08:41 11 A. A core.

08:41 12 Q. And so which Intel product was the first client
08:41 13 product to have two cores?

08:41 14 A. The Intel Yonah processor.

08:41 15 Q. Did the Patent Office know about Yonah when it
08:41 16 decided to grant the '759 patent?

08:41 17 A. No. They did not.

08:41 18 Q. Was that significant to its analysis?

08:41 19 MR. CHU: Objection. Lack of foundation. Calls for
08:41 20 speculation as to what an examiner had in his mind.

08:41 21 THE COURT: I will -- the way it was phrased, I'll sustain
08:41 22 it, but you can certainly re-ask.

08:41 23 BY MS. SOOTER:

08:41 24 Q. Professor Grunwald, did the Patent Office have before
08:41 25 it, when it was deciding whether or not to grant the '759

08:41 1 patent, a processor with two cores that ran SpeedStep?

08:41 2 A. No.

08:41 3 Q. Is that significant to the language of the claims
08:42 4 that we're talking about in this case?

08:42 5 A. Yes.

08:42 6 Q. Professor Grunwald, you were asked a lot of questions
08:42 7 on Friday afternoon about things that might happen in a
08:42 8 restaurant. Do you remember that?

08:42 9 A. Yes.

08:42 10 Q. And Mr. Chu asked you about whether things that
08:42 11 happened in restaurants might be considered requests, right?

08:42 12 A. Yes.

08:42 13 Q. And during that discussion about restaurants, do you
08:42 14 remember whether Mr. Chu showed you the actual claims of the
08:42 15 '759 patent?

08:42 16 A. I don't remember.

08:42 17 MS. SOOTER: Can we bring up Professor Grunwald's slide
08:42 18 DDX-10.34, please?

08:42 19 BY MS. SOOTER:

08:42 20 Q. Professor Grunwald, what do we see here?

08:42 21 A. These are Claims 14 and 18.

08:42 22 Q. Now, what do the claims require -- let me ask you
08:42 23 this: What part of the system must send or provide the
08:43 24 requests?

08:43 25 A. The first master device.

08:43 1 Q. And what part of the system must receive the
08:43 2 requests?

08:43 3 A. The clock controller.

08:43 4 Q. And what must the requests be requesting?

08:43 5 A. The first master device configured to provide a
08:43 6 request to change a clock frequency of a high-speed clock.

08:43 7 Q. Now, notwithstanding all of the questions about
08:43 8 restaurants, do Intel's products have the claims that are
08:43 9 required -- I'm sorry -- the requests that are required by the
08:43 10 '759 patent?

08:43 11 A. No. They don't.

08:43 12 Q. Can you remind us what -- remind the jury, please,
08:43 13 how Intel's Lake processors adjust clock speeds instead of
08:43 14 using requests?

08:43 15 A. In the diagram and in the Intel document it's called
08:43 16 telemetry. It uses these autonomous algorithms that take in
08:43 17 telemetry information and then make requests -- or sorry --
08:43 18 changes.

08:43 19 Q. And again, what do you mean by "autonomous
08:44 20 algorithms"?

08:44 21 A. The algorithms that Dr. Rotem and his group developed
08:44 22 that run on the PCU. So they're software that's running on the
08:44 23 PCU.

08:44 24 Q. And do the accused products use requests or
08:44 25 autonomous algorithms?

08:44 1 A. They use autonomous algorithms.

08:44 2 Q. And did anything Mr. Chu asked you on Friday change
08:44 3 your noninfringement opinions in this case?

08:44 4 A. No.

08:44 5 Q. Now, Mr. Chu asked you a number of questions about
08:44 6 Dr. Rotem's testimony on Friday as well. Do you remember that?

08:44 7 A. Yes.

08:44 8 Q. And Mr. Chu asked you about two lines on Page 250 of
08:44 9 a 365-page transcript. Do you remember that?

08:44 10 A. Yes.

08:44 11 Q. Now, Mr. Chu didn't show you any other testimony
08:44 12 offered by Dr. Rotem, did he?

08:44 13 A. No.

08:44 14 Q. And he didn't provide you any context for those lines
08:45 15 of testimony, did he?

08:45 16 A. That's correct.

08:45 17 Q. Were you here when Dr. Rotem testified on Friday?

08:45 18 A. Yes. I was.

08:45 19 Q. Do you recall that Dr. Rotem was asked about those
08:45 20 same two lines of his deposition testimony on Friday here?

08:45 21 A. Yes. I was.

08:45 22 Q. And Dr. Rotem -- do you recall whether Dr. Rotem
08:45 23 answered questions about that deposition testimony?

08:45 24 A. Yes. He did.

08:45 25 MS. SOOTER: I'd like to bring up the trial transcript

08:45 1 starting at Page 1199, Line 22, please.

08:45 2 MR. CHU: Objection, Your Honor. I think it's improper in
08:45 3 the context of the fact that there's testimony that is in the
08:45 4 trial record. It is already in the trial record and ought not
08:45 5 to be used simply to republish that same testimony with another
08:45 6 witness. It's 403 at least. And it's argumentative.

08:45 7 THE COURT: Overruled.

08:45 8 MS. SOOTER: So starting at --

08:46 9 THE COURT: What I would prefer is for you to read it into
08:46 10 the record -- what I prefer is for you to show the jury what --
08:46 11 in writing what was said and allow him to comment on it.

08:46 12 MS. SOOTER: I'm sorry?

08:46 13 THE COURT: I would -- do you have a written version of it
08:46 14 that you can show the jury?

08:46 15 MS. SOOTER: Yes.

08:46 16 BY MS. SOOTER:

08:46 17 Q. Do you recall that Dr. Rotem testified, "And I said
08:46 18 it, Yonah, did not have a hardware controller. This is the
08:46 19 same answer I gave right now. It did have a programmable
08:46 20 clock"?

08:46 21 A. Yes.

08:46 22 Q. Now, Mr. Chu didn't ask you about that testimony from
08:47 23 Dr. Rotem, did he?

08:47 24 A. That's correct.

08:47 25 Q. And he didn't give you the opportunity to explain any

08:47 1 of your answers Friday, did he?

08:47 2 A. Yes. That's right.

08:47 3 Q. Now, can you explain what you meant when you
08:47 4 testified about Dr. Rotem's answers in his deposition?

08:47 5 A. In his deposition Dr. Rotem mentioned that he was
08:47 6 confused what he was being asked about in those two lines and
08:47 7 then corrected themselves I think at that time and at the trial
08:47 8 here, if I recall correctly.

08:47 9 Q. Do you agree with Dr. Rotem that Yonah had a
08:47 10 programmable clock controller?

08:47 11 A. Yes.

08:47 12 Q. Do you agree with Dr. Rotem's description about how
08:47 13 the Yonah products worked?

08:47 14 A. Yes.

08:47 15 Q. And do you agree with Dr. Rotem's description of how
08:47 16 the Lake series products worked?

08:47 17 A. Yes.

08:47 18 Q. You have no reason to disagree with Dr. Rotem, do
08:48 19 you?

08:48 20 A. No. None.

08:48 21 Q. Let's take a look at your Slide 47, please.

08:48 22 Oh, let me ask you this: Do you remember when Mr. Chu
08:48 23 asked you a number of questions about the last two providing
08:48 24 requirements of Claim 14?

08:48 25 A. Yes.

08:48 1 Q. Let's bring those up on your Slide 47, please.

08:48 2 Now, are these last two requirements, 14[F] and 14[G], the
08:48 3 two requirements that you have a shorthand way of referring to?

08:48 4 A. Yes. They are.

08:48 5 Q. And what is that?

08:48 6 A. I use the phrase "common clock" to mean
08:48 7 "provide the clock frequency of the high-speed clock as an
08:48 8 output to control the clock frequency of."

08:48 9 Q. According to the language of the claims, how does the
08:48 10 language in 14[F], "Provide the clock frequency of the
08:48 11 high-speed clock as an output to control," compare to the
08:49 12 language in 14[G], "Provide the clock frequency of the
08:49 13 high-speed clock as an output to control"?

08:49 14 MR. CHU: Objection, Your Honor. May I have a running
08:49 15 objection with respect to claim construction testimony?

08:49 16 THE COURT: You may.

08:49 17 MR. CHU: Thank you.

08:49 18 BY MS. SOOTER:

08:49 19 Q. Is that language the same in 14[F] as it is in 14[G]?

08:49 20 A. Yes. The same words are used.

08:49 21 Q. What does a system need to do to meet the last two
08:49 22 requirements of Claim 14?

08:49 23 A. Provide -- so 14[B] introduces a clock frequency of a
08:49 24 high-speed clock. In 14[F] and [G], the provide the clock
08:49 25 frequency of the high-speed clock as an output, that needs to

08:49 1 provide that as an output to both the second master device and
08:49 2 the bus.

08:49 3 Q. The requested clock frequency?

08:49 4 A. The requested clock frequency. Correct.

08:49 5 Q. And which components must that requested clock
08:50 6 frequency control, according to the plain meaning of the
08:50 7 claims?

08:50 8 A. The second master device and the bus, the variable
08:50 9 speed bus as it's called.

08:50 10 Q. Did anything Mr. Chu ask you on Friday change your
08:50 11 noninfringement opinions with regard to these two elements?

08:50 12 A. No.

08:50 13 MS. SOOTER: Let's bring up your Slide 52, please.

08:50 14 BY MS. SOOTER:

08:50 15 Q. Can you please remind us why the Lake series of
08:50 16 products do not meet those claim requirements?

08:50 17 A. So, again, there's the -- the use of the autonomous
08:50 18 algorithms. So in the Lake series products, there's a running
08:50 19 computation that is figuring out what the desired clock
08:50 20 frequency setting should be. That just runs continuously based
08:50 21 upon the telemetry information, the autonomous algorithms.

08:50 22 And then there are independent clocks for different parts
08:50 23 of the processor. And so independent clock frequencies are
08:51 24 then set.

08:51 25 Q. What does that mean with regard to the infringement

08:51 1 of the '759 patent?

08:51 2 A. That's why it doesn't infringe.

08:51 3 MS. SOOTER: I have nothing further. Pass the witness.

08:51 4 Thank you, Dr. Grunwald.

08:51 5 MR. CHU: No further questions, Your Honor.

08:51 6 Thank you, Doctor, for your time.

08:51 7 THE COURT: You may step down.

08:51 8 MR. LEE: Your Honor, ladies and gentlemen of the jury,
08:51 9 our next witness will be Mr. Hance Huston, and Mr. Mueller will
08:51 10 do the examination.

08:51 11 (The witness was sworn.)

08:51 12 MR. MUELLER: Good morning, ladies and gentlemen.

08:51 13 DIRECT EXAMINATION

08:51 14 BY MR. MUELLER:

08:52 15 Q. Good morning, Mr. Huston. Could you please introduce
08:52 16 yourself to the jury?

08:52 17 A. Good morning. My name is Hance Huston. I live in
08:52 18 Fishkill, New York with my wife of 38 years. We have two grown
08:53 19 daughters, a grandson who's 14 months, and we'll have a new
08:53 20 granddaughter later this month.

08:53 21 Q. Sir, could you tell us where you went to college?

08:53 22 A. I went to the Pennsylvania State University.

08:53 23 Q. And what did you study?

08:53 24 A. I studied engineering science, which is the honors
08:53 25 program for engineering at Penn State.

08:53 1 Q. What year did you graduate?

08:53 2 A. I graduated with my bachelor's degree in 1982.

08:53 3 Q. And what did you do next?

08:53 4 A. I worked for IBM starting in 1982.

08:53 5 Q. Now, did you also continue your studies in the same
08:53 6 time period?

08:53 7 A. Yes. I did. I was actually able to complete all of
08:53 8 my coursework for both my bachelor's and my master's and
08:53 9 engineering science within the four years that I was at Penn
08:53 10 State, and so I just needed to complete my thesis, which I did
08:53 11 in 1984.

08:53 12 Q. So you earned your master's in '84?

08:53 13 A. Correct.

08:53 14 Q. Now, what was IBM when you joined it in 1982?

08:53 15 A. It was the largest information technology company in
08:54 16 the world.

08:54 17 Q. Does IBM still exist?

08:54 18 A. Yes. It does.

08:54 19 Q. And what type of patent portfolio has IBM maintained
08:54 20 over the years?

08:54 21 A. The largest. IBM has actually been the leader in
08:54 22 U.S. patent issuance for 28 years in a row now.

08:54 23 Q. For how long did you end up working at IBM?

08:54 24 A. For a total of 33 years.

08:54 25 Q. And are you still working there today?

08:54 1 A. No. I retired in 2015.

08:54 2 Q. Now, sir, can you give us -- well, what was your
08:54 3 first position when you started there back in 1982?

08:54 4 A. I started as a reliability engineer in
08:54 5 semiconductors.

08:54 6 Q. What does it mean to be a reliability engineer?

08:54 7 A. It's a multidisciplinary field working all the way
08:54 8 from basic physics through applied materials, through design
08:54 9 systems, electrical engineering, software, and statistics.

08:54 10 Q. And for how long did you work as a reliability
08:55 11 engineer at IBM?

08:55 12 A. For 11 years.

08:55 13 Q. Did you receive a patent as a result of any of your
08:55 14 work in that time period?

08:55 15 A. Yes. I did.

08:55 16 Q. What was the subject matter?

08:55 17 A. The subject matter was the reuse of silicon wafers as
08:55 18 new.

08:55 19 Q. Now, after you finished working as a reliability
08:55 20 engineer, what did you do next?

08:55 21 A. I changed and became a patent engineer.

08:55 22 Q. What does it mean to be a patent engineer at IBM?

08:55 23 A. So a patent engineer is another multidisciplinary
08:55 24 field in which you take the technical knowledge you have about
08:55 25 products and systems and materials and you apply that with an

08:55 1 understanding of patents in order to understand the value of
08:55 2 patents.

08:55 3 Q. So what is the purpose of having a patent engineer be
08:55 4 part of a license negotiation team?

08:55 5 A. In every case, when we were doing patent licensing,
08:55 6 we would always have three people at the table. One of them
08:55 7 would be a patent engineer so that you would have the technical
08:56 8 information necessary to understand the value of the patent.
08:56 9 We'd also have a patent attorney in order to understand the
08:56 10 legal aspects. And we would have a licensed negotiator.

08:56 11 Q. Now, you're not a lawyer, right?

08:56 12 A. No. I'm not.

08:56 13 Q. But as a patent engineer, you helped folks understand
08:56 14 what they were negotiating over in terms of the technology?

08:56 15 A. Yes.

08:56 16 Q. Now, how many patents did you analyze over the years
08:56 17 as a patent engineer?

08:56 18 A. It would be tens of thousands of patents.

08:56 19 Q. And did you help the negotiators set a reasonable
08:56 20 price for those patents?

08:56 21 A. Yes. In every case.

08:56 22 Q. Did any of those patents relate to microprocessor
08:56 23 technology, computer chips?

08:56 24 A. Many of them did. All of the semiconductor ones
08:56 25 would have been relevant. Many of them included specifically

08:56 1 microprocessor patents. And some of the systems ones would
08:56 2 have included microprocessors as part of the system.

08:56 3 Q. Now, sir, at some point did you move into a different
08:56 4 role in patent licensing?

08:56 5 A. Yes. After about six years I moved to become a
08:57 6 licensed negotiator at our cooperate headquarters.

08:57 7 Q. So let's be clear. You actually sat at the table and
08:57 8 negotiated license agreements?

08:57 9 A. Yes. I did.

08:57 10 Q. How many times did you sit at the table and negotiate
08:57 11 patent license agreements?

08:57 12 A. Over 500.

08:57 13 Q. And were you the lead negotiator in many of those
08:57 14 negotiations?

08:57 15 A. Yes.

08:57 16 Q. Can you give us a few examples of some of the
08:57 17 companies that you negotiated with?

08:57 18 A. Some of them would be the major companies that you
08:57 19 would probably hear of, like Sony or Hitachi or Samsung or
08:57 20 Panasonic, a lot of Japanese and Asian companies because that
08:57 21 was my first assignment.

08:57 22 Q. And what was your first assignment?

08:57 23 A. It was as the director of patent licensing for the
08:57 24 entire Asia-Pacific region, running from Japan through Korea,
08:57 25 China, Taiwan, Singapore.

08:57 1 Q. And for how long did you serve in that role?

08:57 2 A. That was three and a half years.

08:57 3 Q. What did you do next?

08:58 4 A. I returned to the United States, and I worked as
08:58 5 director of patent licensing at our corporate headquarters.

08:58 6 Q. Now, as director of licensing, fair to say you were
08:58 7 one of the top executives at IBM in the licensing department?

08:58 8 A. Yes.

08:58 9 Q. And how many patent license agreements did you
08:58 10 negotiate in that role?

08:58 11 A. Again, over 500.

08:58 12 Q. Now, did you also negotiate patent purchase
08:58 13 agreements?

08:58 14 A. Yes. I did.

08:58 15 Q. And can you give us an estimate of the number of
08:58 16 patent purchase agreements you personally negotiated?

08:58 17 A. It would have been more than 50.

08:58 18 Q. For the purchase agreements and the license
08:58 19 agreements that you personally negotiated, did any of those
08:58 20 involve microprocessor patents?

08:58 21 A. Most all of them would have. Microprocessors are
08:58 22 fundamental to computers and information technology. And many
08:58 23 of the patent licenses were so broad as to include
08:58 24 microprocessors as well.

08:58 25 Q. Now, sir, you have a master's degree in engineering,

08:58 1 and you worked as an engineer for 11 years. How many -- how
08:59 2 often did you draw on that experience when you were negotiating
08:59 3 patent licenses and patent purchases?

08:59 4 A. In every case.

08:59 5 MR. MUELLER: Your Honor, at this point we offer
08:59 6 Mr. Huston as an expert in patent licensing and valuing
08:59 7 microprocessor patents.

08:59 8 MR. HEINRICH: No objection.

08:59 9 THE COURT: He'll be admitted.

08:59 10 MR. MUELLER: Thank you, Your Honor.

08:59 11 BY MR. MUELLER:

08:59 12 Q. Now, sir, you're here today as an independent expert;
08:59 13 is that right?

08:59 14 A. That is correct.

08:59 15 Q. You've been retained to provide an analysis on behalf
08:59 16 of Intel; is that right?

08:59 17 A. That is right.

08:59 18 Q. You're being compensated for your time?

08:59 19 A. Yes. I am.

08:59 20 Q. And what's your normal consulting rate?

08:59 21 A. It is \$500 per hour.

08:59 22 Q. Are you charging that same rate in this case?

08:59 23 A. Yes.

08:59 24 Q. And how many hours have you spent working on the
08:59 25 case?

08:59 1 A. Around 300 hours over the last three years.

08:59 2 Q. Now, has Intel engaged you for a few other projects
08:59 3 over the last few years?

08:59 4 A. Yes. They have.

08:59 5 Q. But is this the first time you've ever testified in
08:59 6 court for Intel?

08:59 7 A. Yes.

08:59 8 Q. In fact, is this the first time you've testified in
08:59 9 court for anyone?

08:59 10 A. Yes.

08:59 11 Q. Does your compensation depend in any way whatsoever
09:00 12 on the opinions that you're going to provide to the ladies and
09:00 13 gentlemen of the jury?

09:00 14 A. Not at all.

09:00 15 Q. Does it depend on the outcome of this case?

09:00 16 A. No.

09:00 17 Q. Your opinions are your own?

09:00 18 A. Yes. They are.

09:00 19 Q. All right. Let's talk more about patent licensing,
09:00 20 and I want to get into the factors that you used in your career
09:00 21 at IBM, okay?

09:00 22 A. Yes.

09:00 23 Q. First, can you explain to the ladies and gentlemen of
09:00 24 the jury what exactly is a patent license?

09:00 25 A. So a patent license is when you have a patent owner

09:00 1 and he has the ability to license other companies in order to
09:00 2 use the patent.

09:00 3 Q. When you pay for a license, what do you get?

09:00 4 A. You get the ability to use the patent.

09:00 5 Q. Are you familiar with the terms "exclusive" and
09:00 6 "nonexclusive" in this context?

09:00 7 A. Yes. I am.

09:00 8 Q. What is the difference between an exclusive patent
09:00 9 license on the one hand and a nonexclusive patent license on
09:00 10 the other?

09:00 11 A. In an exclusive license, the patent owner will be
09:01 12 licensing the patent to one and only one party and cannot
09:01 13 license it to anybody else.

09:01 14 In a nonexclusive license, the patent owner will license
09:01 15 the patent to as many parties as he wishes to.

09:01 16 Q. Now, if I take a license, does that mean I have any
09:01 17 sort of ownership stake in the patent?

09:01 18 A. No. Not at all.

09:01 19 Q. Now, sir, do you have an analogy to help us
09:01 20 understand some of these issues?

09:01 21 A. Yes. I do.

09:01 22 MR. MUELLER: So let's pull up DDX-13.2.

09:01 23 BY MR. MUELLER:

09:01 24 Q. What do we see here?

09:01 25 A. So this is a motel. And I'd like to make the analogy

09:01 1 of a patent to a motel, where if you own a motel, then you can
09:01 2 grant licenses, rent out rooms, in that motel.

09:01 3 MR. MUELLER: So let's go to DDX-13.3.

09:01 4 BY MR. MUELLER:

09:01 5 Q. And if I asked you in this analogy for a nonexclusive
09:01 6 patent license, what would that look like?

09:01 7 A. So in a nonexclusive license, you can rent out many
09:02 8 rooms in that motel. And you could rent out \$30 for a room on
09:02 9 the second floor or \$30 for a room on the first floor. More
09:02 10 than one person can rent out rooms.

09:02 11 Q. So even if I get a room, someone else might as well?

09:02 12 A. Yes.

09:02 13 MR. MUELLER: Let's go to DDX-13.4.

09:02 14 BY MR. MUELLER:

09:02 15 Q. And now I want to ask you: If I were to request an
09:02 16 exclusive patent license, how would that work in your analogy?

09:02 17 A. So in this case, the motel owner would be able to
09:02 18 rent the hotel only to one person, you. And therefore every
09:02 19 room would be reserved only for your use.

09:02 20 MR. MUELLER: Let's go to DDX-13.5.

09:02 21 BY MR. MUELLER:

09:02 22 Q. What if I wanted to purchase a patent? How would
09:02 23 that work in your analogy?

09:02 24 A. It would be just like purchasing the actual motel and
09:02 25 becoming the new owner and you could buy it for, say, \$200,000.

09:02 1 Q. Now, what's more expensive, buying a patent or taking
09:02 2 a license to a patent?

09:02 3 A. Buying a patent.

09:02 4 Q. And why is that?

09:03 5 A. Because as -- when you buy the patent, you become the
09:03 6 new owner and you have all the control of the patent itself as
09:03 7 well as the ability to license it to others.

09:03 8 MR. MUELLER: We can take this slide down now.

09:03 9 BY MR. MUELLER:

09:03 10 Q. Now, sir, I want to ask you about the types of
09:03 11 information that you used in the hundreds of times you sat at
09:03 12 the table and negotiated licenses. Do you that subject in
09:03 13 mind?

09:03 14 A. Yes. I do.

09:03 15 MR. MUELLER: Let's take a look at DDX-13.6.

09:03 16 BY MR. MUELLER:

09:03 17 Q. What do we see here?

09:03 18 A. So these -- this is the five different types of
09:03 19 information that I would commonly use that are real-world
09:03 20 evidence of what the price of a patent license should be.

09:03 21 Q. Now, why is real-world evidence significant?

09:03 22 A. Well, it demonstrates what people have actually
09:03 23 valued patents as, and therefore it is the best evidence with
09:03 24 regard to the value of what a patent is.

09:03 25 Q. So let's go through these one by one.

09:03 1 MR. MUELLER: We'll go to DDX-13.8. I want to focus on
09:04 2 the top one, the nature of the patents, so we can go to 13.8.

09:04 3 BY MR. MUELLER:

09:04 4 Q. What do we see here?

09:04 5 A. So the patents themselves have obviously been
09:04 6 invented by somebody, and perhaps they've even been owned by
09:04 7 several different owners over time.

09:04 8 The fact of their actual use by these prior owners is
09:04 9 important because it demonstrates that the patents are valuable
09:04 10 and are actually used by someone.

09:04 11 Q. Now, when you were at IBM, did IBM actually use its
09:04 12 important patents?

09:04 13 A. Yes. We did, and we knew exactly which ones we were
09:04 14 using.

09:04 15 Q. Now, were you here when Dr. Sullivan testified
09:04 16 earlier in this trial?

09:04 17 A. Yes.

09:04 18 Q. And he's VLSI's damages expert, right?

09:04 19 A. Yes.

09:04 20 MR. MUELLER: Let's pull up on the screen some testimony
09:04 21 he gave on Day 3. This is Page 689, Lines 10 through 25.

09:04 22 BY MR. MUELLER:

09:04 23 Q. Question: "And in thinking about the benefits of
09:04 24 these patents, is it relevant whether Freescale or NXP or
09:05 25 SigmaTel ever incorporated the asserted patents into specific

09:05 1 products?"

09:05 2 Dr. Sullivan answered, "No. It is not. That particular
09:05 3 issue is not relevant and typically would be considered a red
09:05 4 herring issue. That means it's a distraction from what is
09:05 5 actually relevant."

09:05 6 And then he continued. I want to ask you about what he
09:05 7 said right there. Do you agree?

09:05 8 A. No. I strongly disagree.

09:05 9 Q. And why do you disagree?

09:05 10 A. Because the actual use is real-world evidence of the
09:05 11 value of the patents by the inventors or the subsequent owners.

09:05 12 MR. MUELLER: Let's go to Dr. Sullivan at Page 764, Line
09:05 13 23, through 765, Line 6.

09:05 14 BY MR. MUELLER:

09:05 15 Q. Question: "And you said you thought it was a red
09:05 16 herring and misleading to talk about that issue. Do you
09:05 17 remember that?"

09:05 18 Answer from Dr. Sullivan, "Not to talk about the issue,
09:06 19 yet my perception of the arguments that Intel and, with all due
09:06 20 respect, you, Mr. Lee, have been making. I do believe those
09:06 21 issues are, as I would describe them, a red herring and
09:06 22 misleading."

09:06 23 Mr. Huston, do you think it was misleading for Intel to
09:06 24 focus on the use or lack thereof of these patents by the prior
09:06 25 owners?

09:06 1 A. Absolutely not.

09:06 2 Q. Why not?

09:06 3 A. Because, again, the real-world evidence of actual use
09:06 4 by the owners is the first and primary estimate of what the
09:06 5 value of the patents is.

09:06 6 MR. MUELLER: Let's go back to DDX-13.8.

09:06 7 BY MR. MUELLER:

09:06 8 Q. There's a second bullet point here, "whether other
09:06 9 companies sought a license to the patents." What does that
09:06 10 refer to?

09:06 11 A. Well, it refers to the fact that if a patent is
09:06 12 widely used, then many different companies will want to have a
09:06 13 license to that patent so that they can use it as well.

09:06 14 Q. Why is that meaningful?

09:06 15 A. Well, it's meaningful because it not only
09:06 16 demonstrates the value of the patent itself, but it also
09:07 17 provides information with regard to the value of that patent
09:07 18 based upon the licenses that are entered into.

09:07 19 MR. MUELLER: Let's go to DDX-13.9.

09:07 20 BY MR. MUELLER:

09:07 21 Q. And this category of information, the nature of the
09:07 22 patents, can you put that into the terms of your analogy?

09:07 23 A. Yes. So I would compare this to, in one case, a
09:07 24 motel that's along a freeway. It's like many other motels, but
09:07 25 there's lots of cars that just simply go by. Some people may

09:07 1 stop or maybe they just continue right on by.

09:07 2 On the other hand, you could have a motel that is at a
09:07 3 resort. It's a really nice place. It's something that lots of
09:07 4 people want to go to, as in getting a license.

09:07 5 Q. And which would charge the higher price?

09:07 6 A. The one that is the resort motel.

09:07 7 MR. MUELLER: Let's go to DDX-13.10.

09:07 8 BY MR. MUELLER:

09:07 9 Q. The second category of information, "prior sales of
09:07 10 the patents," what does that refer to?

09:07 11 A. It refers to actual sales of the patents as they are
09:08 12 passed from one owner to another.

09:08 13 Q. Why is that meaningful in a license negotiation?

09:08 14 A. Because it again shows the actual value that has been
09:08 15 negotiated with regard to the value of the patents and have
09:08 16 been agreed to by two different parties.

09:08 17 MR. MUELLER: Let's go to DDX-13.11.

09:08 18 BY MR. MUELLER:

09:08 19 Q. And can you put this in the terms of your analogy?

09:08 20 A. So in this case, if you look at a motel and you know
09:08 21 that it has been sold twice previously, perhaps for \$175,000 or
09:08 22 \$200,000, then not only do you know what the value of that
09:08 23 motel is, but you have a pretty good idea of what the rental
09:08 24 rate or license rate would be for a room at that hotel.

09:08 25 Q. Would you pay as a rental rate any price similar to

09:08 1 the purchase price?

09:08 2 A. No. It would be much, much less.

09:08 3 MR. MUELLER: Let's go to DDX-13.12.

09:08 4 BY MR. MUELLER:

09:08 5 Q. Third category, "prior comparable agreements between
09:08 6 the parties." What does this refer to?

09:08 7 A. So this refers to the fact that if you know that the
09:09 8 two parties to a negotiation have previously had agreements for
09:09 9 patents that are comparable, then comparable patents, the new
09:09 10 ones, would probably have about the same value.

09:09 11 Q. And why is that relevant to a license negotiation?

09:09 12 A. Because it again shows the value that these parties
09:09 13 in particular have placed on patents that are similar.

09:09 14 MR. MUELLER: So let's go to DDX-13.13.

09:09 15 BY MR. MUELLER:

09:09 16 Q. And how would this work in your analogy?

09:09 17 A. So if you know that for a particular motel that there
09:09 18 have been agreements previously, you've stayed and have paid
09:09 19 \$25 a night or \$30 a night in a particular room, then for a
09:09 20 very similar room in the same motel, you would pay about the
09:09 21 same.

09:09 22 MR. MUELLER: Let's go to DDX-13.14 and turn to the fourth
09:09 23 category.

09:09 24 BY MR. MUELLER:

09:09 25 Q. "Prior comparable negotiations between the parties,"

09:09 1 what does that refer to?

09:09 2 A. That refers to actual offers that have been made by
09:10 3 one or more of the parties with regard to similar patents.

09:10 4 Q. And why is that relevant?

09:10 5 A. Because it again shows the specific value that has
09:10 6 been placed by the parties on patents that are similar.

09:10 7 MR. MUELLER: So let's go to DDX-13.15.

09:10 8 BY MR. MUELLER:

09:10 9 Q. How would this category of information fit into your
09:10 10 analogy?

09:10 11 A. So if you have a motel and you know that it has been
09:10 12 advertised that -- or offered that you can rent a room for \$25
09:10 13 or \$35 a night, then it would be expected that for another room
09:10 14 in the same motel that the value would be about the same.

09:10 15 MR. MUELLER: Let's go to DDX-13.16.

09:10 16 BY MR. MUELLER:

09:10 17 Q. Last category, "prior comparable agreements with
09:10 18 third parties." What is this?

09:10 19 A. So this is where one of the parties to the
09:10 20 negotiation has also had similar agreements, comparable
09:10 21 agreements, with other parties.

09:10 22 Q. Why is that significant?

09:10 23 A. Because it shows a broader range of exactly how
09:11 24 patents have been valued that are similar to the patents that
09:11 25 are at question.

09:11 1 MR. MUELLER: Let's go to DDX-13.17.

09:11 2 BY MR. MUELLER:

09:11 3 Q. Can you explain what we see here?

09:11 4 A. So, again, along the same freeway, if you have
09:11 5 several motels that are pretty much the same, and you know that
09:11 6 previously you had stayed at one of them for \$25 a night or \$30
09:11 7 for the other two, then a very similar motel on that same
09:11 8 freeway would end up costing about the same.

09:11 9 MR. MUELLER: Let's go to DDX-13.18.

09:11 10 BY MR. MUELLER:

09:11 11 Q. We've now gone through all five categories of
09:11 12 real-world evidence. And again, sir, did you, in fact, use
09:11 13 these same categories of information yourself in your career at
09:11 14 IBM?

09:11 15 A. Yes. This was a rather standard toolkit that we
09:11 16 would use in any negotiation where we could.

09:11 17 Q. And this toolkit reflects economics, and it also
09:11 18 reflects common sense; is that fair?

09:11 19 A. Yes. It is.

09:11 20 Q. Now, have you ever heard of something called "hedonic
09:11 21 regression"?

09:11 22 A. I have heard of hedonic regression only in the
09:12 23 context of this litigation.

09:12 24 Q. Did you ever include hedonic regression in the
09:12 25 toolkit you used in license negotiations at IBM?

09:12 1 A. Never.

09:12 2 Q. Now, you've explained to us some of the categories of
09:12 3 information that you analyzed in conducting a license
09:12 4 negotiation. I want to ask you about a little bit different
09:12 5 subject, the form of the payments in the agreements that you
09:12 6 negotiated. Do you have that subject in mind?

09:12 7 A. Yes. I do.

09:12 8 Q. First, are you familiar with the term "lump sum
09:12 9 payment"?

09:12 10 A. Yes. I am.

09:12 11 Q. What is it?

09:12 12 A. A lump sum payment is a single payment that has been
09:12 13 contracted that will be paid once and only once and will
09:12 14 satisfy the terms of the contract.

09:12 15 Q. Are you also familiar with the term "running
09:12 16 royalty"?

09:12 17 A. Yes.

09:12 18 Q. What does that refer to?

09:12 19 A. A running royalty is a payment that would be based on
09:12 20 something, like number of units or perhaps revenue, and would
09:13 21 have to have royalty reports in order to demonstrate the value.

09:13 22 Q. What was the form of payment in the hundreds of
09:13 23 agreements that you negotiated in your years at IBM?

09:13 24 A. In every case, they were a lump sum.

09:13 25 Q. In every case, it was a lump sum?

09:13 1 A. Yes.

09:13 2 Q. Why was that?

09:13 3 A. There are several reasons why just about everybody
09:13 4 does lump sum payments. They provide clarity and certainty.
09:13 5 You know exactly how much is going to be paid. You don't have
09:13 6 to take a look at what are royalty reports or what are disputes
09:13 7 with regard to royalty reports or audits of royalty reports.

09:13 8 Q. And when you pay a lump sum for a license, how often
09:13 9 are you able to use the patents that you take the license to?

09:13 10 A. You're able to use the patents for all and any use.

09:13 11 Q. As many times as you want?

09:13 12 A. Yes.

09:13 13 Q. And that was the customary form of payment in the
09:13 14 industry when you practiced?

09:13 15 A. Yes.

09:13 16 Q. Now, I want to take this toolkit you described and
09:14 17 apply it to the facts in this case. Okay, sir?

09:14 18 A. Yes.

09:14 19 Q. But before we do that, I want to get some basic facts
09:14 20 on the table. Who owns the '373 and '759 patents that are
09:14 21 asserted in this case?

09:14 22 A. VLSI.

09:14 23 Q. How did VLSI come to own these two patents?

09:14 24 A. They bought them from NXP.

09:14 25 Q. Before this case, had you ever heard of either the

09:14 1 '373 or '759 patent?

09:14 2 A. Never.

09:14 3 Q. Now, there's been some arguments and suggestions in
09:14 4 this case about NXP receiving money if there were a recovery in
09:14 5 this case. You heard -- you've heard those arguments?

09:14 6 A. Yes.

09:14 7 Q. I want to ask you the following question, just yes or
09:14 8 no, okay? Yes or no.

09:14 9 Yes or no, would NXP receive the majority of any money
09:14 10 that VLSI gets from this case?

09:14 11 A. No.

09:14 12 Q. Now, you recall at the very beginning of this trial
09:15 13 Mr. Stolarski, the CEO of VLSI, was sitting over here?

09:15 14 A. Yes.

09:15 15 Q. Would Mr. Stolarski personally stand to benefit from
09:15 16 any recovery in this case?

09:15 17 A. Yes.

09:15 18 Q. Now, you've watched this trial since it began; is
09:15 19 that right, sir?

09:15 20 A. Yes.

09:15 21 Q. And you've heard Intel's witnesses explain that
09:15 22 Intel's position is it does not infringe either one of these
09:15 23 two patents. Do you understand that's Intel's position?

09:15 24 A. Yes. I do understand that.

09:15 25 Q. If they're right, what would be owed by Intel to

09:15 1 VLSI?

09:15 2 A. Exactly zero.

09:15 3 Q. Now, sir, have you done an analysis of what the value
09:15 4 of the patents would be to Intel in some hypothetical world
09:15 5 where Intel is using the patents?

09:15 6 A. Yes. I have.

09:15 7 Q. And how'd you do that?

09:15 8 A. I -- I worked through what is called a hypothetical
09:15 9 negotiation.

09:15 10 Q. And what factors did you consider in analyzing this
09:16 11 hypothetical negotiation?

09:16 12 A. All of the ones that I've described with regard to a
09:16 13 toolkit of valuing patents.

09:16 14 Q. So I want to ask you about this hypothetical
09:16 15 negotiation. But just to be crystal clear, you're analyzing a
09:16 16 hypothetical world where Intel uses the patents, right?

09:16 17 A. Yes.

09:16 18 Q. But you understand in this world, Intel's position is
09:16 19 it doesn't use the patents?

09:16 20 A. Yes. I do understand that.

09:16 21 Q. Okay. So let's go into the hypothetical negotiation
09:16 22 world. Who's sitting at the table in this hypothetical
09:16 23 negotiation?

09:16 24 A. It would be Intel and Freescale.

09:16 25 Q. Why is Freescale sitting there?

09:16 1 A. Because at the time of the first alleged
09:16 2 infringement, Freescale was the owner of both patents.

09:16 3 Q. And when is the first allegation of infringement?

09:16 4 A. It is the fourth quarter of 2011.

09:16 5 Q. So the hypothetical negotiation has Intel and
09:16 6 Freescale sitting at the table back in 2011. Do I have that
09:16 7 right?

09:16 8 A. Yes.

09:16 9 Q. And they're negotiating a license to the two patents,
09:16 10 again, in this hypothetical world. Do I have that right?

09:17 11 A. Yes.

09:17 12 Q. And so what did you do to try to figure out what
09:17 13 would happen in that discussion?

09:17 14 A. So I looked at agreements. I looked at the nature of
09:17 15 the patents. I looked at agreements that are comparable. I
09:17 16 went through all of the different things that would show the
09:17 17 value of the patents.

09:17 18 Q. And how did your analysis of this hypothetical
09:17 19 negotiation compare to all the negotiations you conducted at
09:17 20 IBM?

09:17 21 A. It was similar.

09:17 22 MR. MUELLER: Let's go to DDX-13.19.

09:17 23 BY MR. MUELLER:

09:17 24 Q. And, sir, did you, in fact, go through each one of
09:17 25 these factors and apply them to the facts in this case?

09:17 1 A. Yes. I did.

09:17 2 Q. So let's do that.

09:17 3 MR. MUELLER: Let's go to DDX-13.20, and let's start with
09:17 4 the "nature of the asserted patents." And let's go to
09:17 5 DDX-13.21.

09:17 6 BY MR. MUELLER:

09:17 7 Q. What did you find?

09:17 8 A. Well, I found that there was no evidence of use by
09:17 9 the owners. Any of the owners. And that no other company ever
09:17 10 sought a license. And that these patents have been sold
09:18 11 multiple times for small amounts of money.

09:18 12 Q. Now, sir, have you read the patents yourself?

09:18 13 A. Multiple times.

09:18 14 Q. Do you understand them?

09:18 15 A. Yes. I do.

09:18 16 Q. And how does the nature of the patents relate to what
09:18 17 would have happened in this hypothetical negotiation?

09:18 18 A. Well, both of the parties, Freescale and Intel, would
09:18 19 have understood the nature of the patents and would have valued
09:18 20 them appropriately.

09:18 21 Q. So the prior owners of these patents were some
09:18 22 companies called SigmaTel, Freescale and NXP, right?

09:18 23 A. Yes.

09:18 24 Q. Did those companies make products?

09:18 25 A. Yes. They did.

09:18 1 Q. Could they have used the asserted patents in their
09:18 2 products if they wanted to?

09:18 3 A. Yes.

09:18 4 Q. And have you seen any evidence whatsoever that they
09:18 5 did?

09:18 6 A. None.

09:18 7 Q. So what would that look like in your motel analogy,
09:18 8 for example?

09:18 9 A. It would look as though nobody was renting a room at
09:18 10 the motel.

09:18 11 MR. MUELLER: Let's go to DDX-13.22.

09:18 12 BY MR. MUELLER:

09:18 13 Q. Second category, "prior sales of the asserted
09:19 14 patents."

09:19 15 MR. MUELLER: And, Your Honor, here I'm -- I'm going to
09:19 16 have to ask Your Honor, with your permission, to seal the
09:19 17 courtroom. And it's for confidential information of VLSI and
09:19 18 other companies that I just want to be careful to protect.

09:19 19 THE COURT: Okay. If you're not under the protective
09:19 20 order, I'd ask you to leave the courtroom at this time.

21 MR. MUELLER: And if we could also just shut off the
22 public feed.

23 THE COURT: We will.

24 MR. MUELLER: Thank you, Your Honor.

25 (Sealed proceedings.)

09:43 1 MR. MUELLER: Your Honor, at this point we can unseal the
09:43 2 courtroom.

09:43 3 THE COURT: You read my mind.

09:44 4 MR. MUELLER: Now, I want to put up DDX-13.41.

09:44 5 BY MR. MUELLER:

09:44 6 Q. And, sir, I'm not going to ask you about all the work
09:44 7 we've done to get here. But what do we see here?

09:44 8 A. So in addition to identifying what I would consider
09:44 9 to be the correct value, \$2.2 million for the two patents, I
09:44 10 also looked at how that would be distributed amongst the two
09:44 11 patents if only one of them were found to be infringed.

09:44 12 Q. And what are those numbers, sir?

09:44 13 A. Those numbers are 1.47 million for the '759 patent
09:44 14 and \$750,000 for the '373 patent.

09:44 15 Q. And, again, these are lump sums?

09:44 16 A. Yes.

09:44 17 Q. Now, you heard Dr. Sullivan and what he suggested to
09:44 18 the jury in terms of what these patents are worth, right?

09:44 19 A. Yes.

09:44 20 Q. I'm not going to ask you about any of the specifics
09:44 21 of his math, and I also don't want you to say his specific
09:44 22 number out loud, okay?

09:45 23 A. Okay.

09:45 24 Q. But I want to ask you this: Is the number he's
09:45 25 suggesting to the jury in the millions or the billions?

09:45 1 A. The billions.

09:45 2 Q. Well, how can it be that he's suggesting these
09:45 3 patents are worth billions and you're saying 2.2 million?

09:45 4 A. Well, there's several things.

09:45 5 One, the method that he uses, hedonic regression, is
09:45 6 something that I have never seen in any negotiation. And it is
09:45 7 not only unreliable but obviously can give incorrect results.

09:45 8 Q. Sir, you've negotiated hundreds of licenses in your
09:45 9 time at IBM, right?

09:45 10 A. Yes.

09:45 11 Q. If someone sat at the table and asked you for
09:45 12 billions for two of these types of patents, how would you have
09:45 13 responded to them?

09:45 14 A. I would have rejected it and walked out.

09:45 15 MR. MUELLER: Now we can take this slide down.

09:45 16 BY MR. MUELLER:

09:46 17 Q. Earlier in this case we heard about the
09:46 18 Georgia-Pacific factors. You're not a lawyer, but do you know
09:46 19 what the Georgia-Pacific factors are?

09:46 20 A. Yes. I do.

09:46 21 Q. And how many factors are there?

09:46 22 A. There are 15.

09:46 23 Q. Have you considered these 15 Georgia-Pacific factors
09:46 24 in your work in this case?

09:46 25 A. Yes. I have.

09:46 1 Q. All 15?

09:46 2 A. Yes.

09:46 3 MR. MUELLER: Now, let's pull up DDX-13.42.

09:46 4 BY MR. MUELLER:

09:46 5 Q. What do we see here, sir?

09:46 6 A. So these are three of the Factors, 8, 9 and 10, that
09:46 7 are specific to the use of the patents by the licensor, which
09:46 8 in this case would be Freescale in the hypothetical, VLSI in
09:46 9 this lawsuit.

09:46 10 Q. And why do you find these three factors significant?

09:46 11 A. Because again the actual use by the licensor is
09:46 12 relevant. It is required by the Georgia-Pacific factors, and
09:46 13 the fact that there is no evidence of any use by any previous
09:46 14 owner shows that there's very little value associated with the
09:47 15 patents.

09:47 16 MR. MUELLER: Let's go to DDX-13.43.

09:47 17 BY MR. MUELLER:

09:47 18 Q. We have three more Georgia-Pacific factors here.
09:47 19 Tell us what we see.

09:47 20 A. So the first one, No. 1, actually has to do with have
09:47 21 these patents been licensed? And the fact that nobody has ever
09:47 22 specifically licensed these patents and no one has sought a
09:47 23 license shows that the value is low.

09:47 24 Q. So how do these factors impact your opinion as to
09:47 25 what would happen in a hypothetical negotiation?

09:47 1 A. All of these factors are supported by my analysis and
09:47 2 support my analysis as well.

09:47 3 MR. MUELLER: Let's go to PDX-4.12.

09:47 4 BY MR. MUELLER:

09:47 5 Q. This is a slide from VLSI's opening statement. You
09:47 6 saw the opening statement?

09:47 7 A. Yes. I did.

09:47 8 Q. It says "The Cycle of Innovation." I want to ask you
09:47 9 a couple questions.

09:47 10 Has VLSI ever actually licensed the '373 patent to any
09:48 11 other company?

09:48 12 A. No. They have not.

09:48 13 Q. Ever licensed the '759 patent to any other company?

09:48 14 A. No. They have not.

09:48 15 Q. Are you aware of any evidence whatsoever that this
09:48 16 cycle has actually happened?

09:48 17 A. None whatsoever.

09:48 18 MR. MUELLER: We can take this down.

09:48 19 BY MR. MUELLER:

09:48 20 Q. Dr. Sullivan and his analysis, just a few more
09:48 21 questions about that.

09:48 22 Have you seen Dr. Sullivan identify any real-world patent
09:48 23 sales that support his approach?

09:48 24 A. None.

09:48 25 Q. Have you seen Dr. Sullivan identify any real-world

09:48 1 licenses that support his approach?

09:48 2 A. None.

09:48 3 Q. And how many times have you encountered someone using
09:48 4 a methodology like the one Dr. Sullivan advocated to the jury?

09:48 5 A. Never.

09:48 6 MR. MUELLER: Now, let's pull up Dr. Sullivan transcript
09:48 7 Page 757, Lines 19 through 22.

09:48 8 BY MR. MUELLER:

09:49 9 Q. Question: "Thank you, Doctor. So do Intel's experts
09:49 10 in doing this analysis, do they account for Intel's use of the
09:49 11 patents?

09:49 12 Answer: "No. They don't. So if -- so this is kind of
09:49 13 interesting to me."

09:49 14 Now, do you understand Dr. Sullivan to be criticizing you
09:49 15 for not having considered the extent of alleged use of these
09:49 16 patents?

09:49 17 A. Yes.

09:49 18 Q. Now, again Intel's position is they've not used them
09:49 19 at all, but we're in this hypothetical world right now. Did
09:49 20 you consider use of the patents in this hypothetical world?

09:49 21 A. Yes. I did.

09:49 22 Q. And what, in fact, did you consider?

09:49 23 A. I actually considered, based upon identifying all of
09:49 24 these various agreements, the fact that Intel in those
09:49 25 agreements could use the patents as much -- for any and all

09:49 1 use, which is greater than the alleged use of these specific
09:49 2 patents.

09:49 3 Q. And is that consistent or inconsistent with your two
09:50 4 decades of experience at IBM?

09:50 5 A. Consistent.

09:50 6 MR. MUELLER: Let's pull up the transcript at Page 831, 4
09:50 7 to 10. It's Dr. Sullivan again.

09:50 8 BY MR. MUELLER:

09:50 9 Q. Question: "And at the time of those agreements, did
09:50 10 NXP have evidence about the value of Intel's use of the '373,
09:50 11 '759 patents?

09:50 12 "No. That would not be available because, again, that
09:50 13 would be based upon confidential information of Intel that is
09:50 14 only available through, you know, a court proceeding such as
09:50 15 this and is still maintained confidential."

09:50 16 Now, you understand Dr. Sullivan's criticism here to be
09:50 17 that there's certain information that can only be learned
09:50 18 through a case like this and that that would affect the royalty
09:50 19 in a hypothetical negotiation. You understand that's his
09:50 20 position?

09:50 21 A. I understand that.

09:50 22 Q. Do you agree with that?

09:50 23 A. I disagree.

09:50 24 Q. And why do you disagree?

09:50 25 A. I disagree because the parties, NXP, Freescale,

09:50 1 Intel, are all sophisticated parties. They have licensing
09:51 2 professionals, like myself, patent engineers, patent lawyers.

09:51 3 They understand what the value is specifically of their
09:51 4 own patents.

09:51 5 They understand how those patents are used in their own
09:51 6 products.

09:51 7 They have access to publicly available information with
09:51 8 regard to Intel's products, such as specifications, technical
09:51 9 articles, patents, lots of different things. And they would
09:51 10 have a good basis for understanding the use and value of the
09:51 11 patents.

09:51 12 Q. And how did you yourself deal with this issue when
09:51 13 you were negotiating agreements at IBM?

09:51 14 A. Well, we would do exactly what I just described. We
09:51 15 would look at all of the publicly available information. We
09:51 16 would even buy, for instance, Intel products and tear them
09:51 17 apart in order to understand them or test them.

09:51 18 So there's a lot of different ways that these companies,
09:51 19 or VLSI, could understand the actual use and value of the
09:52 20 patents.

09:52 21 Q. Now, you said you never used hedonic regression in
09:52 22 your own career, right?

09:52 23 A. I never used it.

09:52 24 Q. You've also reviewed a number of deposition
09:52 25 transcripts in this case?

09:52 1 A. Yes.

09:52 2 Q. You understand VLSI's CEO Michael Stolarski has done
09:52 3 work as a licensing attorney himself, right?

09:52 4 A. Yes.

09:52 5 Q. According to his deposition, had he ever used hedonic
09:52 6 regression personally in his own career?

09:52 7 A. No.

09:52 8 Q. How about Kevin Klein, the former director of patent
09:52 9 licensing at Freescale, had he used hedonic regression?

09:52 10 A. No.

09:52 11 Q. How about Aaron Waxler, the former vice president of
09:52 12 intellectual property at NXP, had he used regression?

09:52 13 A. No.

09:52 14 Q. James Kovacs, Intel's director of patent listening,
09:52 15 had he ever used regression?

09:52 16 A. No.

09:52 17 Q. Now, we spent some time going through what would have
09:52 18 happened in this hypothetical world, right, Mr. Huston?

09:52 19 A. Yes.

09:52 20 Q. I now want to leave that hypothetical world and
09:53 21 return to right here, where Intel says it's never used or
09:53 22 infringed these two patents once. If they're right, what do
09:53 23 they owe?

09:53 24 A. Exactly zero.

09:53 25 Q. Thank you, sir.

09:53 1 MR. MUELLER: I have no further questions.

09:53 2 MR. HEINRICH: Is this a good time for a short break?

09:53 3 THE COURT: I was just trying to figure out which lawyer
09:53 4 was going to stand up. I think this would be a great time for
09:53 5 a break. We're going to keep it short. If -- we'll be
09:53 6 bringing you back in at five minutes after 10:00.

09:53 7 Remembering my instructions not to discuss the case
09:53 8 amongst yourselves, you are dismissed.

09:53 9 THE BAILIFF: All rise.

09:53 10 (Jury exited the courtroom at 9:53.)

09:53 11 THE COURT: Thank you. You may be seated.

09:53 12 Doctor -- is it doctor?

09:53 13 THE WITNESS: Mister.

09:53 14 THE COURT: Mister -- you may -- no offense. You may step
09:54 15 down.

09:54 16 Anything we need to take up briefly?

09:54 17 MR. HEINRICH: Not from us.

09:54 18 MR. LEE: Not for us, Your Honor.

09:54 19 THE BAILIFF: All rise.

09:54 20 (Recess taken from 9:54 to 10:07.)

10:07 21 THE BAILIFF: All rise.

10:07 22 THE COURT: Please remain standing for the jury.

10:07 23 (The jury entered the courtroom at 10:07.)

10:07 24 THE COURT: Thank you. You may be seated.

10:08 25 Yes, sir.

10:08 1 MR. HEINRICH: Good morning, ladies and gentlemen.

10:08 2 CROSS-EXAMINATION

10:08 3 BY MR. HEINRICH:

10:08 4 Q. Good morning, Mr. Huston.

10:08 5 A. Good morning.

10:08 6 Q. You got involved in this case after you were
10:08 7 recommended to Intel's attorneys by a former IBM attorney who
10:08 8 went on to become an attorney at Intel, correct?

10:08 9 A. Yes.

10:08 10 Q. And you worked with this Intel attorney for 22 years?

10:08 11 A. Yes.

10:08 12 Q. And you consider this Intel attorney to be a friend?

10:08 13 A. Yes.

10:08 14 Q. And this was your first experience as an expert
10:08 15 witness; is that right?

10:08 16 A. Yes.

10:08 17 Q. But since coming into this case, you're now serving
10:08 18 as an expert witness for Intel in four or five other cases?

10:08 19 A. Currently, I have three active cases with Intel and
10:08 20 one case with another company.

10:09 21 Q. And they're all with Mr. Lee's firm, correct?

10:09 22 A. No. Actually one of the Intel cases is with another
10:09 23 firm.

10:09 24 Q. But you're working with multiple cases with Mr. Lee's
10:09 25 firm, correct?

10:09 1 A. Yes.

10:09 2 Q. Now, you were deposed in this case, correct?

10:09 3 A. Yes.

10:09 4 Q. And through the time of your deposition, you had
10:09 5 worked about 200 hours on the Intel/VLSI dispute. Do you
10:09 6 recall that?

10:09 7 A. It was around 150 to 200 hours. Yes.

10:09 8 Q. Okay. So I just want to talk about what you did in
10:09 9 those 150 to 200 hours. You submitted an expert report in this
10:09 10 case, correct?

10:09 11 A. Yes.

10:09 12 Q. It was over 750 pages long?

10:09 13 A. Yes.

10:09 14 Q. And as part of that work, you reviewed over 40 other
10:09 15 expert reports?

10:09 16 A. Yes.

10:09 17 Q. And around 80 deposition transcripts?

10:10 18 A. Yes.

10:10 19 Q. Each of which was 100, 200 pages long?

10:10 20 A. Yes.

10:10 21 Q. And thousands and thousands of pages of documents
10:10 22 that the parties produced?

10:10 23 A. Yes.

10:10 24 Q. And all of the many license agreements that you
10:10 25 testified about earlier this morning?

10:10 1 A. Yes.

10:10 2 Q. And patents that were licensed under those
10:10 3 agreements?

10:10 4 A. Yes.

10:10 5 Q. And you did that all in 150 to 200 hours?

10:10 6 A. Yes.

10:10 7 Q. And without any help from anyone?

10:10 8 A. It was my own work. Yes.

10:10 9 Q. Now, you mentioned one type of royalty structure
10:10 10 called a lump sum structure, correct?

10:10 11 A. Yes.

10:10 12 Q. There's also a royalty structure called a running
10:10 13 royalty. Are you familiar with that?

10:10 14 A. Yes.

10:10 15 Q. Now, let's just talk about this terminology.

10:11 16 Under a running royalty, the more the licensee uses the
10:11 17 licensed patents, the more the licensee pays in royalties,
10:11 18 correct?

10:11 19 A. Use is --

10:11 20 Q. Can you --

10:11 21 A. -- one of the things that can be used with regard to
10:11 22 a running royalty.

10:11 23 Q. So you're familiar with running royalty agreements
10:11 24 where the more the licensee uses the licensed patents, the more
10:11 25 the licensee pays in royalties, correct?

10:11 1 A. I'm familiar --

10:11 2 Q. Can you answer that yes or no?

10:11 3 A. Not exactly.

10:11 4 Q. Okay. Then I'll try to ask a better question then.

10:11 5 So there are running royalty agreements where the licensee
10:11 6 pays a royalty based on the sales of the licensed products.

10:11 7 You're familiar with that, correct?

10:12 8 A. Yes.

10:12 9 Q. So the more products the licensee sells that are
10:12 10 covered by the licensed patents, the more the licensee pays in
10:12 11 royalties, correct?

10:12 12 A. Yes.

10:12 13 Q. So let's say that incorporating the licensed patents
10:12 14 turns out to be very valuable for the licensee's products, and
10:12 15 incorporating that technology allows the licensee to sell many
10:12 16 more licensed products because of that technology, under a
10:12 17 running royalty structure, the licensee would wind up paying
10:12 18 more to the patent owner in royalties, correct?

10:12 19 A. When there is more use, then there would be more
10:12 20 payment based upon the number of units sold.

10:12 21 Q. Under a running royalty structure?

10:12 22 THE COURT: We are trying to get done with the trial.

10:13 23 And -- which is not your fault. But if you would -- on the
10:13 24 cross, if you'd answer his questions just directly with a yes
10:13 25 or a no, if you can, that'll save us a little bit of time.

10:13 1 THE WITNESS: Okay. Thank you, Your Honor.

10:13 2 BY MR. HEINRICH:

10:13 3 Q. So that's under a running royalty structure, correct?

10:13 4 A. Yes.

10:13 5 Q. Now, a lump sum royalty doesn't vary based on use of
10:13 6 the licensed technology, correct?

10:13 7 A. No.

10:13 8 Q. Are you saying no, you disagree? Or no, it doesn't
10:13 9 vary by use?

10:13 10 A. It does not vary by use because it uses any and all
10:13 11 use.

10:13 12 Q. So the licensee pays a single lump sum regardless of
10:13 13 how much or how little the licensee uses the licensed patents,
10:13 14 correct?

10:13 15 A. That is correct.

10:13 16 Q. So if the licensee decides not to use the licensed
10:14 17 patents at all, it doesn't get a discount, right?

10:14 18 A. That is correct.

10:14 19 Q. And if it decides to use the licensed patents a lot,
10:14 20 it doesn't have to pay more, correct?

10:14 21 A. That is correct.

10:14 22 Q. So even if the licensee incorporates the licensed
10:14 23 technology, the licensed patents in its products, and turns out
10:14 24 it's valuable, very valuable for the licensee, and they wind up
10:14 25 selling many more products as a result of incorporating that

10:14 1 licensed technology in their products, they're not going to pay
10:14 2 any more for that license than they paid initially because it
10:14 3 was a lump sum, correct?

10:14 4 A. That is correct.

10:14 5 Q. And you're proposing a lump sum in this case,
10:14 6 correct?

10:14 7 A. Yes.

10:14 8 Q. But do you agree that for a proper damages analysis,
10:15 9 the jury finds in VLSI's favor on liability, the jury will have
10:15 10 to award no more but also no less than the value that VLSI's
10:15 11 patented inventions have provided to Intel. Would you agree
10:15 12 with that?

10:15 13 A. Yes.

10:15 14 Q. Now, you testified that -- I believe you said you
10:15 15 couldn't recall any case in your years at IBM in which there
10:15 16 was not a lump sum structure for a license agreement. Do you
10:15 17 recall that testimony?

10:15 18 A. My testimony was that I had not done any.

10:16 19 Q. Okay. Now -- and you can't recall an example of a
10:16 20 running royalty license at IBM in the semiconductor space,
10:16 21 correct?

10:16 22 A. Correct.

10:16 23 Q. Now, IBM did have a patent license and policy under
10:16 24 which it would license one patent to a company for a running
10:16 25 royalty of 1 percent up to a running royalty of 5 percent on

10:16 1 the overall selling price of the licensed products, correct?

10:16 2 A. Specifically --

10:16 3 Q. Can you answer that yes or no?

10:16 4 A. Yes. And I --

10:16 5 Q. Okay. So --

10:16 6 A. -- can explain.

10:16 7 THE COURT: Doctor, we don't --

10:16 8 THE WITNESS: Okay.

10:16 9 THE COURT: Your lawyers get to have the explanation if
10:16 10 they'd like it.

10:16 11 BY MR. HEINRICH:

10:16 12 Q. But I think I'm going to help you out because what
10:17 13 you told me at your deposition was that --

10:17 14 THE COURT: Counsel, just ask the question.

10:17 15 BY MR. HEINRICH:

10:17 16 Q. Okay. So it's your recollection that that IBM
10:17 17 running royalty policy only applied to IBM PC clones; is that
10:17 18 right?

10:17 19 A. Yes.

10:17 20 Q. And you couldn't recall any instance at IBM where
10:17 21 that 1 percent policy applied to semiconductors. Is that -- is
10:17 22 that your testimony?

10:17 23 A. Yes.

10:17 24 Q. Now, I want to take you back to 1997. Okay? In 1997
10:17 25 you were responsible for all licensing of IBM's patents to

10:17 1 semiconductor companies, correct?

10:17 2 A. Yes.

10:17 3 Q. And you would have been aware of all of IBM's
10:18 4 licenses to semiconductor companies, correct?

10:18 5 A. Yes.

10:18 6 Q. All IBM licenses for semiconductor products, in 1997
10:18 7 you would have been aware of all such licenses, right?

10:18 8 A. Yes.

10:18 9 Q. Now, you recall a license agreement in 1997 that IBM
10:18 10 entered into with a company called JDS Uniphase?

10:18 11 A. No.

10:18 12 Q. Well, let me see if I can refresh your recollection.
10:18 13 Do you recall that IBM licensed JDS Uniphase for products that
10:18 14 are called semiconductor laser chips?

10:18 15 A. I do not recall that.

10:18 16 Q. You don't recall this being an instance where, in
10:18 17 fact, IBM licensed this other company to IBM patents for
10:19 18 semiconductor chips at a running royalty of 1 percent per
10:19 19 patent up to 5 percent on the sale of these semiconductor
10:19 20 products?

10:19 21 A. I do not recall that.

10:19 22 Q. Well, maybe I can help you out with the licensed
10:19 23 patents.

10:19 24 So I'll give you an example. Do you recall a patent -- an
10:19 25 IBM patent that was the '535 patent titled "semiconductor laser

10:19 1 diode deposited on a structured substrate surface." Does that
10:19 2 ring a bell?

10:19 3 A. No.

10:19 4 Q. And you don't recall that patent being licensed to
10:19 5 Uniphase at a running royalty?

10:19 6 A. No.

10:19 7 Q. Now, are you familiar with a treatise drafting
10:19 8 technology patent license agreements?

10:20 9 A. No.

10:20 10 Q. Would it surprise you that that treatise has a 1997
10:20 11 agreement between IBM and JDS Uniphase that was, in fact, a
10:20 12 running royalty agreement for a semiconductor chip?

10:20 13 A. Would it surprise me?

10:20 14 Q. Yes.

10:20 15 A. No.

10:20 16 Q. Now, it's hard for us to test your memory of these
10:20 17 past IBM license agreements because almost all of them are
10:20 18 confidential, correct?

10:20 19 A. Yes.

10:20 20 Q. So there's really no way for us to determine just how
10:20 21 many IBM licenses in the semiconductor space there have been
10:20 22 for a running royalty instead of a lump sum; is that fair?

10:21 23 A. That is fair.

10:21 24 Q. Now, when you were working at IBM, IBM had for years
10:21 25 over a billion dollars in patent licensing revenue, correct?

10:21 1 A. No.

10:21 2 Q. Well, so how about over the course of your time?

10:21 3 Well over a billion dollars in licensing revenue, correct?

10:21 4 A. Over 22 years, it would have been greater than 1

10:21 5 billion. Yes.

10:21 6 Q. And there were some years where IBM generated more in

10:21 7 patent licensing revenue than it did in its operating

10:21 8 divisions?

10:21 9 A. No.

10:21 10 Q. Now, you testified about some transactions that you

10:21 11 think are comparable to the reasonable royalty that would have

10:21 12 been negotiated in this case, correct?

10:22 13 A. Yes.

10:22 14 Q. Now, only three of those transactions involve the

10:22 15 agreements and negotiations and purchases you pointed out, only

10:22 16 three of them actually involved the '373 patent or the '759

10:22 17 patent, correct?

10:22 18 A. Yes.

10:22 19 MR. HEINRICH: So can we pull up Mr. Huston's Slide 23, so

10:22 20 DDX-13.23.

10:22 21 MR. MUELLER: Your Honor, I think we have to seal the

10:22 22 courtroom for VLSI confidential.

10:22 23 THE COURT: Do you want the courtroom sealed?

10:22 24 MR. HEINRICH: Yes. Yes.

10:22 25 THE COURT: Then we'll go off the public record.

10:22 1 (Sealed proceedings.)

10:22 2 THE COURT: Can we go back on the public record?

10:52 3 MR. HEINRICH: Excuse me?

10:52 4 THE COURT: Can we go back on the public record?

10:52 5 MR. HEINRICH: Oh, yes. Yes.

10:52 6 THE COURT: And, Mr. Mueller, you can tell me if we have
10:52 7 to go off of the public record, but I just wanted to get us
10:52 8 started on it unless you need it.

10:52 9 MR. MUELLER: And, actually, I think I can stay on the
10:52 10 public record the entire time, but if we could just maybe keep
10:52 11 the monitors off.

10:52 12 THE COURT: That would be fine. We'll try to do it that
10:52 13 way.

10:52 14 REDIRECT EXAMINATION

10:52 15 BY MR. MUELLER:

10:52 16 Q. I want to pick up right where we left off. You were
10:52 17 asked about some agreements that Intel entered into to settle
10:52 18 certain litigations, right?

10:52 19 A. Yes.

10:52 20 Q. I'm not going to ask you about the specific amounts
10:52 21 because we're on the public record, but I just want to be
10:52 22 really clear about this. Were any of those agreements for two
10:53 23 patents?

10:53 24 A. No.

10:53 25 Q. One of the agreements we heard about, I'm not going

10:53 1 to give the name of it, but it was the very last one you were
10:53 2 asked about. It starts with an N. That covered about 1,000
10:53 3 patents, didn't it?

10:53 4 A. More than 1,000.

10:53 5 Q. The other agreement, hundreds of patents, right?

10:53 6 A. Correct.

10:53 7 Q. Did you see any agreement inside of litigation or
10:53 8 outside of litigation in this case, out of everything you've
10:53 9 reviewed, in which two patents were subject to a price of
10:53 10 billions of dollars?

10:53 11 A. Never.

10:53 12 Q. Have you ever heard of such a thing in your entire
10:53 13 career?

10:53 14 A. No.

10:53 15 Q. Now, you were asked some questions about the use of
10:53 16 patents and how that might relate to a hypothetical
10:53 17 negotiation. Do you recall those questions?

10:53 18 A. Yes.

10:53 19 Q. And the suggestion was the more you use something,
10:53 20 the more you should pay, right?

10:53 21 A. Yes.

10:53 22 Q. So I want to explore that in the context of
10:53 23 licensing. You have licensed patents for many decades, right?

10:53 24 A. Correct.

10:53 25 Q. Two decades at least, right?

10:53 1 A. Yes.

10:53 2 Q. Okay. And did you consider this issue of use in your
10:54 3 own negotiations?

10:54 4 A. I considered the issue of use, but in all cases, we
10:54 5 would end up doing any and all use. So it would be for
10:54 6 anything.

10:54 7 MR. MUELLER: Now, let's pull up on the -- on the
10:54 8 screen -- but not the public monitors, just the screen for the
10:54 9 ladies and gentlemen of the jury -- DDX-13.23.

10:54 10 BY MR. MUELLER:

10:54 11 Q. These are the prior sales of the asserted patents,
10:54 12 right?

10:54 13 A. Yes.

10:54 14 Q. So the patents are actually being sold; is that
10:54 15 correct, sir?

10:54 16 A. That is correct.

10:54 17 Q. And how many times could the new owners use them?

10:54 18 A. The new owners could use these patents as much or as
10:54 19 little as they wanted. They could use them for any and all of
10:54 20 their products.

10:54 21 Q. They can use them once. They could use them a
10:54 22 million times. They could use them a billion times. They
10:54 23 could use them a trillion times; isn't that right?

10:54 24 A. That is correct.

10:54 25 Q. And those are the prices that were paid?

10:54 1 A. Yes.

10:54 2 Q. Now, this reflects basic common sense. If I'm
10:54 3 selling a house, do I have to know what the owner is going to
10:54 4 use it for to set a price?

10:54 5 A. No.

10:54 6 Q. What if I'm selling a car? Do I have to know how
10:54 7 often it's going to be driven to set a price for the car?

10:55 8 A. Of course not.

10:55 9 Q. And if I'm selling a patent, do I have to know
10:55 10 exactly how many times it's going to be used to set a price for
10:55 11 that patent?

10:55 12 A. No.

10:55 13 Q. And how did you deal with this issue over the years
10:55 14 at IBM?

10:55 15 A. So when we would negotiate these kinds of licenses,
10:55 16 we would recognize that we were going to be granting a complete
10:55 17 usage of the patents for as much as the licensee would have,
10:55 18 and we would price it in a way that would be acceptable to both
10:55 19 sides for unlimited use.

10:55 20 Q. Now, did you ever negotiate with competitors of IBM?

10:55 21 A. Always.

10:55 22 Q. And did you assume that those competitors were going
10:55 23 to use the patents you were licensing to them?

10:55 24 A. Yes.

10:55 25 Q. Did you take that into account in setting the prices?

10:55 1 A. Yes.

10:55 2 MR. MUELLER: Let's go to DDX-13.25.

10:55 3 BY MR. MUELLER:

10:55 4 Q. Here we have the prior comparable agreements that
10:55 5 Intel struck with Freescale and NXP over the years. Do you see
10:55 6 these, sir?

10:55 7 A. Yes.

10:55 8 Q. I'm not going to read the terms because we're on the
10:55 9 public record. These were in one instance a purchase agreement
10:56 10 and one instance a license, right?

10:56 11 A. Correct.

10:56 12 Q. How many times could Intel use the patents that it
10:56 13 purchased or licensed under these agreements?

10:56 14 A. As much as they wanted for all of their products.

10:56 15 Q. Million times, billion times, trillion times?

10:56 16 A. Correct.

10:56 17 Q. Freescale, NXP, they were sophisticated parties,
10:56 18 right?

10:56 19 A. Yes.

10:56 20 Q. And they struck these agreements for these amounts?

10:56 21 A. Correct.

10:56 22 Q. And they knew Intel could use these patents as much
10:56 23 as they wanted?

10:56 24 A. Yes. That was fundamental.

10:56 25 MR. MUELLER: Next slide, DDX-13.38.

10:56 1 BY MR. MUELLER:

10:56 2 Q. These are the 18 agreements that you found comparable
10:56 3 in this case; is that right, sir?

10:56 4 A. Yes.

10:56 5 Q. Under each and every one of these agreements, how
10:56 6 many times could Intel use the patents that it was either
10:56 7 purchasing or licensing?

10:56 8 A. As much as they wanted in all of their products.

10:56 9 Q. Billions, trillions. They could use as much as they
10:56 10 wanted, right?

10:56 11 A. Correct.

10:56 12 Q. And those were the prices that were struck?

10:56 13 A. Yes.

10:56 14 Q. Now, you've identified 18 comparable license
10:57 15 agreements. You've also identified comparable agreements for
10:57 16 the prior owners. You've also identified prior sales
10:57 17 agreements for these patents, right, sir?

10:57 18 A. Yes.

10:57 19 Q. Do you understand that in patent law there's this
10:57 20 concept called the "comparable license agreement"?

10:57 21 A. Yes.

10:57 22 Q. And that's relevant to a hypothetical negotiation?

10:57 23 A. Yes.

10:57 24 Q. How many comparable agreements did Dr. Sullivan and
10:57 25 VLSI identify in this case?

10:57 1 A. Zero.

10:57 2 Q. Now, you were asked a couple questions about
10:57 3 Dr. Colwell and some work that he had done. Do you recall
10:57 4 that?

10:57 5 A. Yes.

10:57 6 Q. On the subject of technological comparability?

10:57 7 A. Yes.

10:57 8 Q. Now, you, sir, are an engineer with a master's
10:57 9 degree, correct?

10:57 10 A. Correct.

10:57 11 Q. You worked at IBM as an engineer for 11 years?

10:57 12 A. Correct.

10:57 13 Q. Did you yourself do an independent technological
10:57 14 comparability analysis in this case?

10:57 15 A. Yes. I did.

10:57 16 Q. And are the opinions you gave the jury based on your
10:57 17 own independent work?

10:57 18 A. Yes.

10:57 19 Q. Last few questions. You were asked about the
10:58 20 financial terms of some of these agreements and the suggestion
10:58 21 was made: Well, those were just numbers that the accountants
10:58 22 for folks like the prior owners had come up with, right?

10:58 23 A. Correct.

10:58 24 Q. Have you taken the accountants at their word and
10:58 25 assumed they weren't lying?

10:58 1 A. I have.

10:58 2 Q. And have you based your analysis on the accounting
10:58 3 valuations given to these patents in the actual agreements?

10:58 4 A. Yes.

10:58 5 Q. Now, you've observed all of the testimony in this
10:58 6 case, correct, sir?

10:58 7 A. Yes.

10:58 8 Q. And you know the only witness who's taken the stand
10:58 9 in this case to say there's been any use by Intel of these two
10:58 10 patents is Dr. Conte, right?

10:58 11 A. Correct.

10:58 12 Q. If the ladies and gentlemen of the jury decide that
10:58 13 Dr. Conte was wrong, that there is no infringement, then what
10:58 14 does Intel owe for these two patents?

10:58 15 A. Exactly zero.

10:58 16 Q. And in the hypothetical world where Intel is using
10:58 17 them, do you think that in that hypothetical world they would
10:58 18 pay a running royalty or a lump sum?

10:58 19 A. A lump sum.

10:58 20 Q. But if there's no use at all, the number is?

10:59 21 A. Zero.

10:59 22 Q. Thank you, sir.

10:59 23 MR. MUELLER: I have no further questions.

10:59 24 MR. HEINRICH: Can we pull up DDX-13.38?

10:59 25 RECROSS-EXAMINATION

10:59 1 BY MR. HEINRICH:

10:59 2 Q. So, Mr. Huston, you pointed to this slide a moment
10:59 3 ago and said that Intel could use the patents licensed under
10:59 4 these agreements in billions of products, right?

10:59 5 A. Or more.

10:59 6 Q. And yet you didn't point the ladies and gentlemen of
10:59 7 the jury to even one single Intel product covered by the
10:59 8 claimed invention of any of these licensed patents, correct?

11:00 9 A. Correct.

11:00 10 Q. Now, let's talk about numbers of patents and
11:00 11 royalties for numbers of patents.

11:00 12 MR. HEINRICH: And let's pull back up PTX-212.

11:00 13 BY MR. HEINRICH:

11:00 14 Q. Under the IBM licensing practices that we talked
11:00 15 about a few moments ago, IBM would license a single patent for
11:00 16 1 percent, correct?

11:00 17 A. For PC clones. Yes.

11:00 18 Q. And for two patents, they would license for a
11:00 19 2 percent running royalty on sales, correct?

11:00 20 A. For PC clones. Yes.

11:00 21 Q. And 2 percent -- well, even 1 percent is much more
11:00 22 than what Dr. Sullivan is proposing, correct?

11:00 23 A. Yes.

11:00 24 MR. HEINRICH: No further questions. Thank you very much.

11:00 25 THE COURT: You may step down, sir.

11:00 1 Mr. Lee?

11:01 2 MR. LEE: Your Honor, ladies and gentlemen of the jury,
11:01 3 Intel rests.

11:01 4 We would renew our motions, but we can do that at the
11:01 5 break so we don't waste the jury's time.

11:01 6 THE COURT: Very good.

11:01 7 Mr. Chu?

11:01 8 MR. CHU: Thank you, Your Honor. And at an appropriate
11:01 9 time we will have some motions to make as well. And then I
11:01 10 will turn the next stage of the trial over to one of my
11:01 11 colleagues.

11:01 12 THE COURT: And, Mr. Lee, you approve of waiting on those
11:01 13 motions as well?

11:01 14 MR. LEE: I'm sorry, Your Honor?

11:01 15 THE COURT: You approve on us waiting on Mr. Chu's motions
11:01 16 as well?

11:01 17 MR. LEE: Yes.

11:01 18 THE COURT: Okay.

11:01 19 MR. LEE: I think we can make them --

11:01 20 THE COURT: I just wanted to -- I need --

11:01 21 MR. LEE: We can follow the same procedure.

11:01 22 THE COURT: Sure. I just needed it on the record.

11:01 23 MR. LEE: That's perfectly fine.

11:01 24 THE COURT: Yes.

11:01 25 MR. HEINRICH: VLSI calls its next witness Professor Tom

11:01 1 Conte.

2 THE COURT: Dr. Conte, if you will recall that you are
3 under oath.

4 MR. HEINRICH: May I proceed?

5 THE COURT: Yes, please.

6 DIRECT EXAMINATION

7 BY MR. HEINRICH:

11:02 8 Q. Welcome back, Professor Conte.

11:02 9 A. Thank you.

11:02 10 Q. Were you present here in court on Friday when
11:02 11 Dr. Grunfeld [sic] testified regarding the validity of the '759
11:02 12 patent?

11:02 13 A. Dr. Grunwald, I think you mean.

11:02 14 Q. Oh, sorry. Dr. Grunwald, I apologize.
11:02 15 Were you here for that?

11:02 16 A. Yes. I was.

11:02 17 Q. And can you summarize your opinions after carefully
11:03 18 considering his testimony?

11:03 19 A. Yes. I'd be happy to. I prepared a slide on this.
11:03 20 There it is.

11:03 21 Okay. So I listened to Dr. Grunwald's opinions. And I
11:03 22 concluded, when he described Yonah, that Yonah is the old
11:03 23 approach that I talked about, and I'll talk a little bit more
11:03 24 about that. And the '759 patent is the new approach, and I'll
11:03 25 talk some more about that.

11:03 1 I also listened, and I am still convinced that the U.S.
11:03 2 Patent Office thoroughly examined and correctly issued the '759
11:03 3 patent. He did not provide any clear and convincing evidence
11:03 4 of invalidity. Definitely nothing --

11:03 5 MR. LEE: Your Honor, I object to the (inaudible) --

11:03 6 THE REPORTER: Counsel, I can't hear you.

11:03 7 THE COURT: I can't hear you, Mr. Lee.

11:03 8 MR. LEE: It's not his job to decide what clear and
11:03 9 convincing evidence is. That's the jury's job. He gets to
11:03 10 just put his testimony in.

11:03 11 THE COURT: I'll sustain that.

11:03 12 If you could re-ask the question.

11:04 13 BY MR. HEINRICH:

11:04 14 Q. So in your opinion, is there clear and convincing
11:04 15 evidence of invalidity?

11:04 16 MR. LEE: I object.

11:04 17 THE COURT: I'll sustain.

11:04 18 BY MR. HEINRICH:

11:04 19 Q. What's your opinion on the validity of the '759
11:04 20 patent?

11:04 21 A. I believe it's valid. I know that if it were
11:04 22 invalid, what would happen would be you're taking away a patent
11:04 23 owner's rights. You're taking away their property. I own 40
11:04 24 patents, so I understand what that means. And the '759 is
11:04 25 valid.

11:04 1 Q. Okay. So can you remind us what Yonah's approach was
11:04 2 for speed control?

11:04 3 A. Sure. So -- and this is what I showed last Tuesday.
11:04 4 So if you remember, it's the operating system in Yonah that
11:04 5 determines how to what they say "step the speed," right? So it
11:04 6 controls the speed. It's what makes the decisions.

11:04 7 And it has to wait in line -- I mean, those speed
11:04 8 instructions have to wait in line after all your programs are
11:05 9 running, right?

11:05 10 So it ends up -- if you were to put in more instructions,
11:05 11 that would be "too intrusive." And because it takes this long
11:05 12 time, it's really slow.

11:05 13 Q. And why do you have too intrusive in quotes there?

11:05 14 A. That's what Dr. Rotem described the old approach as
11:05 15 in his IEEE paper.

11:05 16 Q. And just remind us, what does Intel call this old
11:05 17 approach?

11:05 18 A. They call it SpeedStep.

11:05 19 Q. And was the '759 patent's approach to speed control
11:05 20 the same or different than the Yonah old approach?

11:05 21 A. It was different. Okay. So the '759 teaches that
11:05 22 you have this programmable clock controller with an embedded
11:05 23 computer program. That's what makes the control decisions.
11:05 24 That's what changes the speed. And it's dedicated, right?
11:05 25 It's this computer-in-a-computer, and it can do it over a

11:05 1 thousand times faster.

11:05 2 Q. Now, in the Yonah SpeedStep approach, what was making
11:06 3 the decisions to change speed?

11:06 4 A. In Yonah it was the operating system that did that.

11:06 5 Q. And did we get a confirmation of that at trial?

11:06 6 A. Yes. We did.

11:06 7 Q. So let's pull up -- well, can you summarize the
11:06 8 testimony that you recall on that?

11:06 9 A. Yeah. I recall -- actually, here it is. Dr. Rotem
11:06 10 testified, "So the OS," the operating system, "power manager
11:06 11 tracks the utilization of the core. And based on that
11:06 12 utilization, it makes an explicit decision."

11:06 13 So it's the operating system making the calls, making the
11:06 14 decisions.

11:06 15 Q. Now, in the '759 patent, where is the operating
11:06 16 system running?

11:06 17 A. In the '759 patent, it's running on the cores.

11:06 18 Q. Now, what's the role of the cores in making the speed
11:07 19 changes in the '759 approach?

11:07 20 A. All they do is they provide requests.

11:07 21 MR. HEINRICH: So let's pull up PTX-2, the '759 patent,
11:07 22 and let's go to Claim 14, Element B.

11:07 23 BY MR. HEINRICH:

11:07 24 Q. And what does the patent itself tell us about the
11:07 25 role of the cores or the first master device in this system?

11:07 1 A. Yeah. Here it is. This is one of the claims, and it
11:07 2 says, "The first master device is configured to provide a
11:07 3 request." That's what it does. It provides a request to that
11:07 4 programmable clock controller, that embedded
11:07 5 computer-in-a-computer.

11:07 6 Q. And under this '759 approach, what component is
11:07 7 actually making the decision to increase speed?

11:07 8 A. It's that programmable clock controller.

11:07 9 Q. So let's turn to this Column 5 at Lines 55 to 56, the
11:08 10 same patent, the '759. And what does the '759 patent say about
11:08 11 this decision to increase speed?

11:08 12 A. So here I'll read it out. It says, "Moving to
11:08 13 Decision Step 204, the controller determines whether to enable
11:08 14 the request."

11:08 15 So it's the controller making the calls.

11:08 16 Q. And it references Decision Step 204.

11:08 17 MR. HEINRICH: And let's pull up Figure 2 of the patent to
11:08 18 look at that step.

11:08 19 BY MR. HEINRICH:

11:08 20 Q. And what does the patent show us here in Figure 2?

11:08 21 A. All right. So this is some of what the programmable
11:08 22 clock controller is doing. And you see it says, like in 202,
11:08 23 "receive a request to increase speed." And then 204 is that
11:08 24 decision block. We talked about this on Tuesday. And it
11:08 25 decides whether or not to listen to that request and -- and

11:08 1 speed things up.

11:08 2 Q. Now, does this -- this method, using a dedicated
11:09 3 computer within a controller, have an impact on how fast the
11:09 4 speed control changes can be made?

11:09 5 A. Yes. It does. It's much, much faster.

11:09 6 MR. HEINRICH: So, Mr. Simmons, let's bring up D-273 and
11:09 7 go to Page 5 of 60.

11:09 8 BY MR. HEINRICH:

11:09 9 Q. And do you recall Dr. Grunwald's testimony about this
11:09 10 slide during cross-examination?

11:09 11 A. I do.

11:09 12 Q. So let's highlight the -- the line here that says,
11:09 13 "300 to 1,000 milliseconds." And what is -- first of all, is
11:09 14 this document about the Yonah SpeedStep approach?

11:09 15 A. Yeah. You can see right there, it says Yonah.

11:09 16 Q. And what does this 300 to 1,000 millisecond reference
11:09 17 mean?

11:10 18 A. It means that at most the operating system can make a
11:10 19 speed change at about a third of a second. Sometimes it's
11:10 20 saying it's as slow as a second.

11:10 21 Q. Now, let's contrast that to the '759 approach.

11:10 22 MR. HEINRICH: Can we go back to PTX-2, the '759 patent,
11:10 23 and go to Column 4, at Lines 8 through 10.

11:10 24 BY MR. HEINRICH:

11:10 25 Q. And what does the patent say here?

11:10 1 A. Yeah. So look here, it says, "The predefined time
11:10 2 interval may vary from one microsecond to several
11:10 3 milliseconds."

11:10 4 Q. So that's -- that's much faster than the Yonah
11:10 5 approach?

11:10 6 A. Over 1,000 times.

11:10 7 Q. And has Intel itself benefitted from the new approach
11:10 8 that is described and claimed in the '759 patent?

11:10 9 A. Yes, they have. Greatly.

11:10 10 Q. And what does Intel call its implementation of the
11:10 11 '759 patent?

11:10 12 A. They call it Speed Shift.

11:10 13 Q. Okay. So let's go to your opinion on validity.

11:10 14 And you understand that Intel claims that the '759 patent
11:11 15 is anticipated by Yonah?

11:11 16 A. I do.

11:11 17 Q. And what tests for anticipation did you apply in your
11:11 18 analysis?

11:11 19 A. Let's go back to my slides, if we could.

11:11 20 Nope.

11:11 21 Q. Let's go -- okay.

11:11 22 MR. HEINRICH: Let's go to the next slide.

11:11 23 BY THE WITNESS:

11:11 24 A. There we go.

11:11 25 So I applied this test. "For anticipation, Intel must

11:11 1 prove by clear and convincing evidence that all of the
11:11 2 requirements of the claim are present in a single piece of
11:11 3 prior art."

11:11 4 BY MR. HEINRICH:

11:11 5 Q. And is that test met, in your opinion?

11:11 6 A. No. I'll show you not only are -- not all of the
11:11 7 elements of the claim present in Yonah, but what Dr. Grunwald
11:11 8 pointed to was not a single piece of prior art.

11:11 9 Q. Okay.

11:11 10 MR. HEINRICH: So let's pull up Claim 14.

11:11 11 BY MR. HEINRICH:

11:12 12 Q. And before you get into the details, can you identify
11:12 13 for us what claim element or claim elements you believe are
11:12 14 missing from Yonah?

11:12 15 A. Yes. So I think we probably all have this memorized
11:12 16 by now, don't we? So I'll go over it -- and "Yonah does not
11:12 17 have this programmable clock controller having an embedded
11:12 18 computer program therein. The program including instructions
11:12 19 to and D, E and F." Okay. So I'll go over that. It doesn't
11:12 20 at least have that.

11:12 21 Q. Okay.

11:12 22 MR. HEINRICH: So, Mr. Simmons, let's go to the trial
11:12 23 transcript and pull up Page 1386 and blow up Lines 16 through
11:12 24 24.

11:12 25 BY MR. HEINRICH:

11:12 1 Q. Who's testifying here?

11:12 2 A. This is Dr. Grunwald.

11:12 3 Q. And what is Dr. Grunwald saying here, first about the
11:12 4 old legacy Yonah processor?

11:12 5 A. He said it -- it does not have a PCU. Yonah did not
11:12 6 have a PCU.

11:12 7 Q. Do you agree with that?

11:12 8 A. Yes.

11:12 9 Q. And what about the Skylake processors?

11:12 10 A. He said that Skylake does have a PCU.

11:13 11 Q. And does Dr. Grunwald contest that the Skylake and
11:13 12 Lake processors' PCU is, in fact, a programmable clock
11:13 13 controller?

11:13 14 A. No. He does not. He agrees with that.

11:13 15 Q. Okay. Now, is the claimed programmable clock
11:13 16 controller a hardware controller or a software controller?

11:13 17 A. It's a hardware controller.

11:13 18 Q. And after Yonah was introduced, did Intel actually
11:13 19 add this hardware controller, the PCU, with the Speed Shift
11:13 20 functionality to its Lake processors?

11:13 21 A. It did.

11:13 22 Q. Could a person of skill have taken the Yonah approach
11:13 23 and come up with this Speed Shift approach using the '759
11:13 24 technology without undue experimentation?

11:13 25 A. No. They could not have.

11:13 1 Q. And is there some real-world evidence of that?

11:14 2 A. Sure. Intel, in fact, calls -- if you remember, they
11:14 3 call Speed Shift a revolutionary new approach.

11:14 4 Q. And how long did it take Intel to introduce its first
11:14 5 processor with Speed Shift after Yonah was introduced?

11:14 6 A. Well, let's see. Skylake was introduced in 2015. I
11:14 7 think Yonah was introduced in 2010 or '11. I think it's 2011.

11:14 8 Q. Okay. So let's talk in more detail about
11:14 9 Dr. Grunwald's anticipation analysis.

11:14 10 A. Okay.

11:14 11 Q. What did he point to as --

11:14 12 MR. HEINRICH: Well, you know, actually, let's go to --
11:14 13 let's go to the next slide.

11:14 14 BY THE WITNESS:

11:14 15 A. Okay.

11:14 16 BY MR. HEINRICH:

11:14 17 Q. And what did Dr. Grunwald point to as Yonah's
11:14 18 programmable clock controller?

11:14 19 A. Okay. Well, first, this -- this -- I was going to go
11:15 20 and walk through the elements that are missing. I had a nice
11:15 21 little graphic. We'll see that again.

11:15 22 What he pointed to was this piece here called the power
11:15 23 management logic.

11:15 24 Q. And is the power management logic a programmable
11:15 25 clock controller with an embedded computer program, in your --

11:15 1 in your opinion?

11:15 2 A. No. Well, first, logic is kind of computer
11:15 3 engineering-ese for simple circuits. And in this case, there's
11:15 4 no OS -- first, let me back off.

11:15 5 Simple circuits, let's go back there. The OS controls
11:15 6 this thing. The OS is calling the shots. We already talked
11:15 7 about that. This is not programmable. It has no embedded
11:15 8 computer instructions in it.

11:15 9 Q. Is this power management logic that Dr. Grunwald is
11:15 10 pointing to, is this a computer-within-a-computer like
11:15 11 Mr. Henson conceived?

11:15 12 A. No. Not at all.

11:16 13 Q. Let's go through some of Dr. Grunwald's other slides
11:16 14 now.

11:16 15 MR. HEINRICH: So can you -- Mr. Simmons, can you pull up
11:16 16 DDX-10.72? And let's blow up the -- the figure on the left.

11:16 17 BY MR. HEINRICH:

11:16 18 Q. And the -- Professor Conte, is this a slide that
11:16 19 Dr. Grunwald presented during his direct testimony to show that
11:16 20 the Yonah controller was programmable?

11:16 21 A. Yeah. So I want you to understand that engineers
11:16 22 sometimes use programmable just to mean that you can configure
11:16 23 it. And here it's talking about "with programmable five US,"
11:16 24 that's five microsecond delay per step.

11:16 25 And the next one is "wait five micro seconds until

11:16 1 unlocked, programmable." "Wait until five microseconds until
11:16 2 unlocked, programmable." "With programmable, five-microsecond
11:16 3 delay."

11:16 4 This is as programmable as a kitchen timer. Okay? And,
11:17 5 ladies and gentlemen, if you recall when I talked about how a
11:17 6 program's a step of -- a set of instructions, like you do to
11:17 7 make a cake, this is like saying that your kitchen timer could
11:17 8 make a cake.

11:17 9 Q. Now, does the use of the word "programmable" standing
11:17 10 alone mean that Yonah had a programmable clock controller with
11:17 11 an embedded computer program?

11:17 12 A. No. Not at all.

11:17 13 Q. Did Yonah have an embedded computer program in the
11:17 14 functionality that Dr. Grunwald was pointing to?

11:17 15 A. No. It did not.

11:17 16 MR. HEINRICH: Okay. So let's bring up DDX-10.70. And,
11:17 17 again, blow up the image on the left.

11:17 18 BY MR. HEINRICH:

11:17 19 Q. Professor Conte, did Yonah measure performance in a
11:17 20 predefined time interval?

11:17 21 A. No. Yonah did not. The operating system did.
11:17 22 That's what this is talking about. It's the operating system
11:18 23 that's doing that.

11:18 24 MR. HEINRICH: Let's go to Exhibit -- or Slide -- Mr. --
11:18 25 Dr. Grunwald's Slide DDX-10.67.

11:18 1 BY MR. HEINRICH:

11:18 2 Q. And is this another image that he showed the jury
11:18 3 during his testimony?

11:18 4 A. Yes. It is.

11:18 5 Q. And what do we see on the left here?

11:18 6 MR. HEINRICH: Let's blow that up again.

11:18 7 BY THE WITNESS:

11:18 8 A. This is the die photo of Yonah.

11:18 9 BY MR. HEINRICH:

11:18 10 Q. And is there a programmable clock controller here in
11:18 11 the Yonah processor?

11:18 12 A. There is not.

11:18 13 Q. Okay.

11:18 14 MR. HEINRICH: And let's pull up DDX-10.71. And, again,
11:18 15 blow up the diagram on the left, please.

11:18 16 BY MR. HEINRICH:

11:18 17 Q. And I think we heard some testimony about this figure
11:18 18 earlier today. What do we -- what do we see here?

11:18 19 A. Well, I guess he used this because it looks pretty
11:18 20 complicated, right? But there's really just a couple of
11:18 21 registers, they go down to a bunch of adders and then they go
11:19 22 into these latches, and that's about it. It's -- it's
11:19 23 circuitry as complicated as what my sophomores would build.

11:19 24 Q. And there's a reference to a GV3 stepper here. Do
11:19 25 you see that?

11:19 1 A. Yes. I do.

11:19 2 Q. Is that a programmable clock controller with embedded
11:19 3 computer programs?

11:19 4 A. No. It's not.

11:19 5 Q. We heard some reference from Dr. Grunwald this
11:19 6 morning about microcode. Do these GV3 steppers have in them
11:19 7 microcode?

11:19 8 A. No. Microcode is in the core.

11:19 9 Microcode is not an embedded computer program.

11:19 10 Microcode is what -- it's what you use to decode the
11:19 11 complicated instructions. It just tells you how to break them
11:19 12 into simple instructions. That's all it is.

11:19 13 Q. So after reviewing Dr. Grunwald's evidence and
11:19 14 listening carefully to his testimony, what's your conclusion
11:20 15 about whether Yonah anticipates the '759 patent asserted
11:20 16 claims?

11:20 17 A. Yonah does not anticipate the '759 patent asserted
11:20 18 claims.

11:20 19 Q. And what are the missing elements, in your opinion?

11:20 20 A. Well, we have a slide. Yeah. This is that pretty
11:20 21 slide I said.

11:20 22 So Yonah, as I showed, does not have a programmable clock
11:20 23 controller having an embedded computer program therein. And
11:20 24 that means --

11:20 25 THE COURT: Doctor, you need to slow down just a little

11:20 1 bit.

11:20 2 THE WITNESS: Yeah. Okay. I took too much coffee this
11:20 3 morning.

11:20 4 THE COURT: Whatever it is, you're reading faster than I
11:20 5 can listen. So just slow down a little bit.

11:20 6 THE WITNESS: My wife tells me that all the time, by the
11:20 7 way.

11:20 8 BY THE WITNESS:

11:20 9 A. All right. So there's not that programmable clock
11:20 10 controller with an embedded computer program. It doesn't
11:20 11 receive the request provided by the -- by the cores. It
11:20 12 doesn't do ENF either. And we'll talk about those later.

11:20 13 BY MR. HEINRICH:

11:21 14 Q. Okay. And does your analysis of Claim 14 apply to
11:21 15 all of the asserted claims of the '759 patent?

11:21 16 A. Yes. It does.

11:21 17 Q. And so then what's your summary on Intel's
11:21 18 anticipation defense?

11:21 19 A. Intel's anticipation defense is -- is full of holes.
11:21 20 It didn't change that the '759 patent is valid.

11:21 21 Q. Okay. So let's switch gears a little bit and talk
11:21 22 about your response to some of Intel's noninfringement
11:21 23 arguments that we heard at trial last week.

11:21 24 A. Okay.

11:21 25 Q. Do you recall Dr. Grunwald's criticism of your

11:21 1 opinion about what the request is in the Lake processors?

11:21 2 A. I do.

11:21 3 Q. And just remind us, what is the request in the Lake
11:21 4 processors?

11:21 5 A. So remember when you change the load, that's when the
11:22 6 cores send this Core_Active to the PCU. So it's the
11:22 7 Core_Active signal.

11:22 8 Q. Does Dr. Grunwald agree with that?

11:22 9 A. No. He doesn't.

11:22 10 MR. HEINRICH: So let's -- Mr. Simmons, if you could pull
11:22 11 up the trial transcript at Page 1302 and blow up Line 25 and go
11:22 12 on to the next page to Line 1.

11:22 13 BY MR. HEINRICH:

11:22 14 Q. And what does Dr. Grunwald testify here to?

11:22 15 A. So he was asked, "Is the Core_Active signal an input
11:22 16 into the autonomous algorithms that calculate the clock speed
11:22 17 ratios?"

11:22 18 And he said, "No."

11:22 19 Q. And do you agree with that?

11:22 20 A. I do not agree with that.

11:22 21 Q. Now, where do these autonomous algorithms occur, or
11:22 22 where are they running in the Lake processors?

11:22 23 A. They're running in the PCUs.

11:22 24 So if we go back to my slides. So this is actually

11:23 25 Dr. Grunwald's slide here and he shows, right here, here's the

11:23 1 autonomous algorithms. They're running in the PCU.

11:23 2 Q. And at the top here there's an arrow pointing to a
11:23 3 little green folder and it says "Core C0 Residency." What's
11:23 4 that?

11:23 5 A. If you remember on Tuesday, we talked about this.
11:23 6 Inside the PCU are these counters. They're called C0 residency
11:23 7 counters. And the way they work is that Core_Active sends a
11:23 8 signal to the PCU, and that starts these counters counting.

11:23 9 Q. Now, despite the way it's presented on Dr. Grunwald's
11:23 10 slide, is the Core C0 Residency within the PCU?

11:23 11 A. Yes. It is.

11:23 12 Q. Okay. And is there a relationship between the Core
11:23 13 C0 Residency and the Core_Active requests?

11:23 14 A. There is. So let me take you to slide -- and I'll
11:23 15 blow that up. And here's exactly what I said on Tuesday. The
11:23 16 core sends Core_Active signal and that starts this counter
11:24 17 counting. And that's measured in this activity window we
11:24 18 talked about.

11:24 19 Q. Is the Core_Active then an input to the autonomous
11:24 20 algorithms that calculate the speed of the cores?

11:24 21 A. Absolutely. In fact -- I'm sorry.

11:24 22 Q. Can you explain -- can you explain?

11:24 23 A. Yeah. I'd be happy to. I was trying to. Okay.

11:24 24 If you didn't have that signal to turn on the counters,
11:24 25 the PCU would never know that the cores' load changed. It

11:24 1 would never change the speed of the cores due to loading.

11:24 2 Q. And there was some discussion on Friday and then
11:24 3 again this morning about Dr. Grunwald's restaurant analogy.

11:24 4 Just to be clear, who was the one that raised this
11:24 5 restaurant analogy?

11:24 6 A. Dr. Grunwald in his report raised that.

11:24 7 Q. Okay. So let's turn to Dr. Grunwald's argument
11:24 8 regarding the clock elements. So these are Elements [E] and
11:25 9 [F]. Do you recall his testimony about that?

11:25 10 A. I do.

11:25 11 MR. HEINRICH: So let's -- Mr. Simmons, let's pull up
11:25 12 DDX-10.52.

11:25 13 BY MR. HEINRICH:

11:25 14 Q. And this is another one of Dr. Grunwald's slides.
11:25 15 What is Dr. Grunwald trying to argue through his slide here?

11:25 16 A. He's trying to argue that the clock frequency of the
11:25 17 bus and the clock frequency of the second master are required
11:25 18 to be the same in the '759 patent.

11:25 19 Q. So in other words, he's arguing that Elements [E] and
11:25 20 [F] require controlling the second master and the bus so that
11:25 21 they're operating at the same frequency?

11:25 22 A. Yes.

11:25 23 Q. Okay. So let's take another look at the claim
11:25 24 elements themselves.

11:25 25 MR. HEINRICH: So, Mr. Simmons, can you bring up PTX-2,

11:25 1 the '759 patent, and blow up Elements [E] and [F] of Claim 14?

11:26 2 Okay. Thank you.

11:26 3 BY MR. HEINRICH:

11:26 4 Q. So would a person of skill, reading Elements [E] and
11:26 5 [F], conclude that these elements require setting the second
11:26 6 master and the bus to the same ultimate frequency?

11:26 7 A. No. So if you step back and just think about it, if
11:26 8 the patentee wanted that, the patentee wouldn't have put in two
11:26 9 elements. The patentee would have just said, "Provide the
11:26 10 high-speed clock to the second master in the bus." Much
11:27 11 simpler language.

11:27 12 Instead the patentee said, "Provide the clock frequency of
11:27 13 the high-speed clock as an output to control a clock frequency
11:27 14 of a second master device."

11:27 15 And furthermore, said, "Provide the clock frequency of the
11:27 16 high-speed clock as an output to control," and used even
11:27 17 different words, "variable clock frequency of the bus."

11:27 18 And so to an engineer that's why -- that's who he was
11:27 19 writing to. To an engineer, that means that these are
11:27 20 different frequencies that are going to the bus in the second
11:27 21 master.

11:27 22 MR. HEINRICH: So, Mr. Simmons, let's pull up PTX-3588 and
11:27 23 go to Page 15 and then blow up the top half of that figure.

11:27 24 BY MR. HEINRICH:

11:27 25 Q. Do you recall this figure that Dr. Grunwald was

11:27 1 questioned about during his cross-examination?

11:27 2 A. Yes. And I think y'all probably remember me using
11:27 3 this on Tuesday, too, right?

11:27 4 Q. First, what figure is this?

11:28 5 A. This is the Skylake client clock circuit.

11:28 6 Q. Now, how many -- is there a high-speed clock shown
11:28 7 here?

11:28 8 A. Yes. That's BCLK.

11:28 9 Q. And how many high speed clocks are shown in this
11:28 10 clock circuit?

11:28 11 A. One.

11:28 12 Q. So does that mean that the resulting frequencies have
11:28 13 to be the same?

11:28 14 A. No. You see what happens, like I explained, is
11:28 15 that's an output that goes into these PLLs. Remember those?
11:28 16 Those are used to further adjust that clock to deliver a clock
11:28 17 to the core. There's CPLL, that delivers the clock to the
11:28 18 core. And CLR PLL, that takes that, that further adjusts it
11:28 19 and delivers that to the bus.

11:28 20 Q. So in the Lake processors, the output of the
11:28 21 high-speed clock is further adjusted by the PLLs and then
11:28 22 controls the cores and the bus?

11:29 23 A. That's right.

11:29 24 Q. Now, does the '759 patent say that the high-speed
11:29 25 clock must directly control the various components on the chip

11:29 1 to the same frequencies?

11:29 2 A. No. It says in fact the opposite.

11:29 3 MR. HEINRICH: So let's bring up PTX-2 and pull up
11:29 4 Column 4 at Lines 39 through 41.

11:29 5 BY MR. HEINRICH:

11:29 6 Q. What does the patent say, in fact?

11:29 7 A. This is saying that the clock that goes through the
11:29 8 bus is further adjusted from that high-speed clock. It's
11:29 9 saying exactly what I said the claim calls out.

11:29 10 Q. And how does that relate to Intel's Lake processors?

11:29 11 A. That matches what the PLLs do. That matches what the
11:29 12 Intel Lake processors do.

11:29 13 Q. Okay.

11:29 14 MR. HEINRICH: Let's switch gears again and turn to the
11:29 15 '373 patent.

11:29 16 BY MR. HEINRICH:

11:29 17 Q. Were you present in the courtroom when Dr. Sylvester
11:30 18 testified last week?

11:30 19 A. I was.

11:30 20 Q. Did you hear him say that the word "sleep" doesn't
11:30 21 appear in the '373 patent?

11:30 22 A. Yes. I recall that.

11:30 23 Q. Well, putting aside whether it uses that particular
11:30 24 word, does the '373 patent in fact discuss the concept of a
11:30 25 computer circuit going to sleep?

11:30 1 A. Yes. It does.

11:30 2 MR. HEINRICH: So let's pull up PTX-1, the '373 patent,
11:30 3 and highlight Column 4, Lines 42 through 45.

11:30 4 BY MR. HEINRICH:

11:30 5 Q. And what does the '373 patent say here,
11:30 6 Professor Conte?

11:30 7 A. Okay. So here it's talking about the minimum standby
11:30 8 voltage for the memory array, minimum standby voltage, which
11:30 9 represents a minimum operating voltage allowable for the memory
11:30 10 array during standby. Standby means sleep.

11:30 11 Q. Okay. So let's turn to another issue that
11:31 12 Dr. Sylvester raised.

11:31 13 Do you recall Dr. Sylvester saying that the
11:31 14 RING_RETENTION_VOLTAGE, the value that you were telling us
11:31 15 about early last week, that that didn't refer to C6 SRAM?

11:31 16 A. I do.

11:31 17 Q. And do you agree with that?

11:31 18 A. No. I don't. If you -- and I showed you this. If
11:31 19 you looked at that ring domain, inside it is a memory that
11:31 20 includes the C6 SRAM. And what's more, all the memory there is
11:31 21 built out of the same identical bit cell circuitry.

11:31 22 Q. So in your opinion, does the RING_RETENTION_VOLTAGE,
11:31 23 is that the minimum operating voltage for the C6 SRAM memory?

11:31 24 A. It is.

11:31 25 Q. Okay. Last issue for you, Professor Conte.

11:31 1 Do you recall on cross-examination that Dr. Sylvester was
11:31 2 asked about his slide showing that RING_RETENTION_VOLTAGE in
11:32 3 his analysis was actually higher than the voltage level of what
11:32 4 I'll call VOLTAGE_0?

11:32 5 A. Yes. I recall that.

11:32 6 MR. HEINRICH: And, Mr. Simmons, can we pull up that
11:32 7 cross-examination slide?

11:32 8 BY MR. HEINRICH:

11:32 9 Q. And on the left side, is this from Dr. Sylvester's
11:32 10 slide showing what I just indicated?

11:32 11 A. Yes. It is.

11:32 12 Q. Okay. And then on the right side, this is a figure
11:32 13 that Mr. Chu used from D-505?

11:32 14 A. That's correct.

11:32 15 MR. HEINRICH: So let's actually pull up D-505 and go to
11:32 16 Page 24.

11:32 17 BY MR. HEINRICH:

11:32 18 Q. And this is an actual Intel document?

11:32 19 A. This is an Intel document, indeed.

11:32 20 MR. HEINRICH: And yeah. If we can blow up the figures at
11:33 21 the top there.

11:33 22 BY MR. HEINRICH:

11:33 23 Q. First, let's just start by referencing Vretention.

11:33 24 A. Right there? Yeah.

11:33 25 Q. Can you clear up what that dotted line is called

11:33 1 Vretention?

11:33 2 A. In this context that's the RING_RETENTION_VOLTAGE.

11:33 3 Q. And are you sure about that?

11:33 4 A. I am.

11:33 5 MR. LEE: Your Honor, this is confidential. Could we just
11:33 6 turn off the public monitor?

11:33 7 THE COURT: Absolutely. Do you need it to -- Mr. Lee, do
11:33 8 you want it to be taken off of the public feed as well, or do
11:33 9 you just want it off the monitor?

11:33 10 MR. LEE: Only if he's going to start talking through the
11:33 11 details. Generally it's fine.

11:33 12 THE COURT: Okay. We will make this so that only the only
11:33 13 the jury and appropriate people can see the monitors.

11:33 14 BY MR. HEINRICH:

11:33 15 Q. Now, in this Intel document, where is the voltage V0
11:33 16 shown in relationship to the RING_RETENTION_VOLTAGE level?

11:33 17 A. So that's that voltage. It's -- he gave the name as
11:34 18 RING_VOLTAGE_VF_0. If you don't mind, I'll just call it V0 to
11:34 19 shorten things. But it's shown above the
11:34 20 RING_RETENTION_VOLTAGE.

11:34 21 Q. So let's go back to the cross-examination slide. On
11:34 22 the left, where is Dr. Sylvester showing this V0 or
11:34 23 RING_VF_VOLTAGE_0 in relationship to the
11:34 24 RING_RETENTION_VOLTAGE?

11:34 25 A. He's showing it below. And -- now wait. Just think

11:34 1 about this. This is the voltage you need to remember, right?

11:34 2 Why would you ever operate a circuit below the voltage you need

11:34 3 for the memories to remember? That just can't be.

11:34 4 Q. So what's going on here then?

11:34 5 A. Well, here's what he's doing. Dr. Sullivan didn't

11:35 6 compensate for something --

11:35 7 Q. Dr. Sylvester?

11:35 8 A. Did I say -- I get my Ss confused.

11:35 9 Dr. Sylvester didn't compensate for something called

11:35 10 inverse temperature dependance.

11:35 11 Here's what that is. Imagine -- and I bet this will be

11:35 12 easy to do. Imagine it's a really cold day, and you go out and

11:35 13 you try to turn on your car and it won't crank over. What's

11:35 14 happening is because it's so cold, the voltage on your battery

11:35 15 is suppressed.

11:35 16 Well, Intel knows when their chips are cold that it has to

11:35 17 boost a voltage in order to use it. And that's what they do

11:35 18 with V0 here.

11:35 19 Q. Okay. So we're going to talk about that in more

11:35 20 detail. But first, did you hear Dr. Sylvester say that his

11:35 21 values here that he used to generate this graph were based on

11:35 22 4 million or so parts of fused data that he analyzed?

11:35 23 A. Yes. I heard that.

11:35 24 Q. And how did he measure those values?

11:35 25 A. He measured them with a script, which is a kind of

11:36 1 computer program.

11:36 2 Q. And I have on the document camera here Defendant
11:36 3 Exhibit 1107. Is this --

11:36 4 A. Can you -- can you put that up? I can't see it.

11:36 5 Q. And --

11:36 6 A. I still can't see it. Okay. There it is. Yeah.

11:36 7 Q. And Dr. Sylvester was asked some questions --

11:36 8 MR. HEINRICH: And then, actually, we can go on the public
11:36 9 record for this.

11:36 10 BY MR. HEINRICH:

11:36 11 Q. Is -- Dr. Sylvester was shown Exhibit D-1107A during
11:36 12 his testimony. Do you recall that?

11:36 13 A. He was.

11:36 14 Q. Now, is this actually Intel source code?

11:36 15 A. No. It's not.

11:36 16 Q. Who wrote this code?

11:36 17 A. I wrote this code.

11:37 18 Q. And why did you write this code?

11:37 19 A. I wrote this code because Intel gave us this
11:37 20 complicated encoded database of millions of entries, and I had
11:37 21 to write code to decode that so I could analyze it.

11:37 22 Q. How did Dr. Sylvester get your code?

11:37 23 A. So the Court required that anything we wrote like
11:37 24 this, the other side could get.

11:37 25 Q. And then did Dr. Sylvester use your code to generate

11:37 1 the values that he showed in that slide?

11:37 2 A. Yes. He did.

11:37 3 Q. Did he interpret the data he obtained from using your
11:37 4 code correctly?

11:37 5 A. No. He interpreted it mis- -- incorrectly. He
11:37 6 misinterpreted it.

11:37 7 Q. And can you explain how (loss of audio) to do that?

11:37 8 A. -- compensate for when the chip is cold. So when you
11:37 9 compensate for when the chip is cold, that ends up with what
11:37 10 you see on the right with V0 above the ring retention voltage.

11:38 11 And, again, that makes sense, right? You want to operate at
11:38 12 the voltage above where you -- you can remember.

11:38 13 Q. So he's comparing in his slide here the
11:38 14 RING_VF_VOLTAGE_0 to the RING_RETENTION_VOLTAGE, correct?

11:38 15 A. Yes. He is.

11:38 16 Q. But is he comparing them on an apples-to-apples basis
11:38 17 at the same temperature?

11:38 18 A. No. So V/F 0 is measured at 100 degrees Celsius.
11:38 19 RING_RETENTION_VOLTAGE is measured at zero degrees Celsius.
11:38 20 That's the difference between boiling water and ice.

11:38 21 Q. Now, what happens if you measure V0 and the
11:38 22 RING_RETENTION_VOLTAGE calibrated to the same temperatures?

11:38 23 A. If you measure them calibrated to the same
11:39 24 temperatures, they, no surprise, match the Intel graph over
11:39 25 here on the right.

11:39 1 Q. So the data that Dr. Sylvester presented to the jury
11:39 2 in arguing that the RING_RETENTION_VOLTAGE can't be a minimum
11:39 3 operating voltage because V0 is beneath it, was -- was he
11:39 4 comparing those two values on an apples-to-apples basis or not?

11:39 5 A. No. He wasn't.

11:39 6 Q. Now, does Intel itself calibrate those voltage levels
11:39 7 to the same temperature before presenting analysis?

11:39 8 A. Yes. They do.

11:39 9 Q. And when they're calibrated to a same temperature,
11:39 10 apples-to-apples basis, what's the relationship between V0 and
11:39 11 the RING_RETENTION_VOLTAGE?

11:39 12 A. So, again, Dr. Sylvester misinterpreted the results
11:39 13 of my code. V0 is calibrated at a different temperature than
11:40 14 the RING_RETENTION_VOLTAGE. When you compensate for
11:40 15 temperature, V0 is going to be always above the
11:40 16 RING_RETENTION_VOLTAGE.

11:40 17 Q. So how does this relate to your opinion that the
11:40 18 RING_RETENTION_VOLTAGE is, in fact, the minimum operating
11:40 19 voltage for the C6 SRAM, as claimed by the '373 patent?

11:40 20 A. Again, when I interpret the data correctly, it
11:40 21 further confirms my opinion.

11:40 22 Q. And is that what we see in Intel's own Exhibit 505?

11:40 23 A. That's correct.

11:40 24 Q. Now, did you see any other evidence about how the
11:40 25 RING_RETENTION_VOLTAGE is -- is compensated?

11:40 1 A. I did.

11:40 2 MR. HEINRICH: And can we go to Exhibit 3662 at Page 702?

11:40 3 BY MR. HEINRICH:

11:41 4 Q. And is this the document we saw last week in your
11:41 5 direct testimony?

11:41 6 A. It is. And I believe Dr. Sullivan also used this
11:41 7 document.

11:41 8 Q. Dr. Sylvester?

11:41 9 A. I did it again. Dr. Sylvester.

11:41 10 MR. HEINRICH: So let's pull up the row on

11:41 11 RING_RETENTION_VOLTAGE.

11:41 12 BY MR. HEINRICH:

11:41 13 Q. What does this document tell us about the temperature
11:41 14 at which the RING_RETENTION_VOLTAGE is measured at?

11:41 15 A. Okay. Remember that phenomena I talked about? It's
11:41 16 called inverse temperature dependance, ITD. Look at the last
11:41 17 sentence. This is inverse temperature dependance corrected to
11:41 18 zero degrees Celsius.

11:41 19 Q. And then, again, when the V0 is similarly IDD
11:41 20 corrected at zero degrees, what do we see?

11:41 21 A. V0, of course, is going to be above this minimum
11:41 22 voltage, you need remember.

11:41 23 Q. Okay. So did you hear anything last week from
11:42 24 Dr. Sylvester or Intel's other witnesses that changed your
11:42 25 opinion that Intel infringes the '373 patent?

11:42 1 A. No.

11:42 2 Q. And did you see anything or hear anything last week
11:42 3 that changed your opinion about whether Intel infringes the
11:42 4 '759 patent?

11:42 5 A. No. I did not.

11:42 6 Q. Okay.

11:42 7 MR. HEINRICH: Thank you very much, Professor Conte.

11:42 8 THE WITNESS: Thank you.

11:42 9 THE COURT: Mr. Lee, I won't hold you to this. Do you
11:42 10 anticipate going longer than about 30 minutes with this
11:42 11 gentleman?

11:42 12 MR. LEE: No. Your Honor, I'm going to try -- I'm not
11:42 13 going to plow old ground. I'm going to try to finish with him
11:43 14 in 15 minutes.

11:43 15 THE COURT: Perfect. Thank you. And I'm not counting.
11:43 16 I'm just --

11:43 17 MR. LEE: I know. 15 minutes will be enough and then it
11:43 18 will be lunchtime.

11:43 19 THE WITNESS: I respect this booth protects us all from
11:43 20 COVID, but I just wish it was a little bigger.

11:43 21 (Laughter.)

11:43 22 THE COURT: We'll work on that for the next trial.

11:43 23 THE WITNESS: Thank you, Your Honor.

11:43 24 CROSS-EXAMINATION

11:43 25 BY MR. LEE:

11:43 1 Q. Dr. Conte, good morning.

11:43 2 A. Good morning.

11:43 3 Q. Let me end where -- let me start where you ended on
11:43 4 infringement issues. Can we do that?

11:43 5 A. Yes.

11:43 6 Q. Now, I'm not going to replot old ground. I'm going
11:43 7 to try to do this very quickly, if we can.

11:43 8 Let me start with the '373 patent. Can we do that?

11:43 9 A. Yes.

11:43 10 Q. And I'm going to ask you about some facts relevant to
11:43 11 the C6 SRAM. That's what you say is the memory, correct?

11:43 12 A. Yes.

11:43 13 Q. In Haswell, correct?

11:43 14 A. Yes. And also in Broadwell.

11:44 15 Q. Now, you were here when Jonathan Douglas testified,
11:44 16 were you not?

11:44 17 A. I was.

11:44 18 Q. He testified that Intel does not identify a lowest
11:44 19 retention voltage for the C6 SRAM, correct?

11:44 20 A. I believe that was his testimony. Yes.

11:44 21 MR. LEE: And if I could have DDX-19.3.

11:44 22 BY MR. LEE:

11:44 23 Q. We can agree that you and he simply disagree,
11:44 24 correct?

11:44 25 A. That's correct.

11:44 1 Q. Now, Mr. Douglas also testified that there's no
11:44 2 relationship between RING_RETENTION_VOLTAGE and the C6 SRAM.
11:44 3 Do you recall that testimony?

11:44 4 A. I do.

11:44 5 Q. And, again, the two of you disagree, correct?

11:44 6 A. Yes. We disagree.

11:44 7 Q. Now, Mr. Douglas also testified that the ring
11:44 8 retention -- the ring -- withdrawn.

11:44 9 Mr. Douglas also testified that the ring domain operates
11:44 10 at a voltage below RING_RETENTION_VOLTAGE, known as
11:44 11 RING_VF_VOLTAGE_0, correct?

11:44 12 A. He did.

11:45 13 Q. Right. And, again, you just disagree with the person
11:45 14 who came here, testified under oath, who designed the product,
11:45 15 correct?

11:45 16 A. I did.

11:45 17 Q. Right. And on each of these different issues, you
11:45 18 and Mr. Douglas -- were you here for his cross-examination?

11:45 19 A. I was.

11:45 20 Q. And you heard everything he said about how the
11:45 21 accused features work in Haswell?

11:45 22 A. I believe I did.

11:45 23 Q. And in Broadwell?

11:45 24 A. Yes.

11:45 25 Q. And on these key issues that are key to infringement,

11:45 1 the two of you simply disagree, correct?

11:45 2 A. I wouldn't characterize it that way.

11:45 3 Q. Now, let me ask you -- well, we just looked at the
11:45 4 slides. Where he said no, you said yes. Where he said no, you
11:45 5 said yes. You would call that disagreement, wouldn't you?

11:45 6 A. On those issues, yes.

11:45 7 Q. And those are issues that are important to the jury's
11:45 8 determination of infringement, correct?

11:45 9 A. Yes.

11:45 10 Q. All right.

11:45 11 MR. LEE: Now, could I have D-505?

11:45 12 MY MR. LEE:

11:45 13 Q. Which you talked to the jury about today.

11:46 14 Do you have that on the screen? Do you recall that?

11:46 15 A. I do.

11:46 16 Q. And you were using this document to talk about that
11:46 17 comparative set of charts that you had put on the screen. Do
11:46 18 you recall that?

11:46 19 A. Yes.

11:46 20 Q. Now, you know that this document was something that
11:46 21 didn't describe a finished product, don't you?

11:46 22 A. I believe virtually all the documents Intel produced
11:46 23 were drafts.

11:46 24 Q. This was -- in particular, if I turn you to Page 23,
11:46 25 refers to TBD, correct? You see TBD, TBD, TBD.

11:46 1 A. I do.

11:46 2 Q. You know what that is. That's to be determined,
11:46 3 correct?

11:46 4 A. That's right.

11:46 5 Q. If I turn you to Page 27, and I highlight 2.3.5.1,
11:47 6 you'll see "TBD, the following is not the POR." That's to be
11:47 7 determined, the following is not the plan of record, correct?

11:47 8 A. That's correct.

11:47 9 Q. So the one thing we can agree upon, this document,
11:47 10 surely, is not a final description of the products, correct?

11:47 11 A. That's correct.

11:47 12 Q. Now, you were here when Mr. Borkowski testified as
11:47 13 well, correct?

11:47 14 A. I was.

11:47 15 Q. He actually wrote much of the code, correct?

11:47 16 A. I'm sorry?

11:47 17 Q. He wrote some of the code, correct?

11:47 18 A. You're referring to the P-code?

11:47 19 Q. Yes.

11:47 20 A. Yes. He did.

11:47 21 Q. Now, he said that ring -- RING_VF_VOLTAGE_0, which
11:47 22 you just talked to Mr. Heinrich about, does, in fact,
11:47 23 correspond to a voltage level actually used in some conditions,
11:47 24 correct?

11:47 25 A. That's correct.

11:47 1 Q. And, again, you just disagree?

11:48 2 A. That's incorrect.

11:48 3 Q. Well, you agree that it is then? You agree with him
11:48 4 on that issue?

11:48 5 A. Yes. It's a --

11:48 6 Q. Okay. Fair enough.

11:48 7 A. It's a voltage that's actually used, yes.

11:48 8 Q. Good. Now, the '373 patent also claims regulated
11:48 9 voltages, correct?

11:48 10 A. Yes.

11:48 11 Q. And you told the jury last week that a regulated
11:48 12 voltage is a reliable voltage, correct?

11:48 13 A. It's a controlled voltage.

11:48 14 Q. And Mr. Douglas told the jury, when he came here to
11:48 15 talk about his own product, that VCCR is a floating and not
11:48 16 reliable voltage, correct?

11:48 17 A. I believe that was his testimony. Yes.

11:48 18 MR. LEE: So can I have DDX-19.7?

11:48 19 BY MR. LEE:

11:48 20 Q. Again, the two of you now just disagree, correct?

11:48 21 A. I don't think so. And I can explain.

11:48 22 Q. Well, your answer is you don't think so?

11:49 23 A. That's correct.

11:49 24 Q. Okay. Let me ask you about a different topic.

11:49 25 You told the jury -- you told the jury last week that the

11:49 1 ramp -- that there was a ramp as part of the Package C7
11:49 2 transition, correct?

11:49 3 A. That's correct.

11:49 4 Q. You said it happens hundreds of times per second,
11:49 5 correct?

11:49 6 A. Up to. Yes.

11:49 7 MR. LEE: Can I have DDX-19.10?

11:49 8 BY MR. LEE:

11:49 9 Q. Mr. Douglas came here and he said it happens a few
11:49 10 times per second. Do you recall that?

11:49 11 A. Yes. I do.

11:49 12 Q. And on cross-examination, he wasn't asked a single
11:49 13 word about whether that was correct or not?

11:49 14 A. I don't recall one way or the other.

11:49 15 Q. Now, let's go to the '759 patent. You were here when
11:49 16 Dr. Rotem testified, correct?

11:49 17 A. Yes.

11:49 18 Q. You were here when Mr. Borkowski testified, correct?

11:49 19 A. Yes.

11:49 20 Q. Now, let's just look at where we -- you agree or
11:50 21 disagree with them.

11:50 22 Dr. Rotem and Mr. Borkowski testified about Speed Shift in
11:50 23 particular, correct?

11:50 24 A. Yes. That's correct.

11:50 25 Q. Now, you disagree with them about how some of the

11:50 1 features of Speed Shift works, correct?

11:50 2 A. I don't believe I disagree in any substantive
11:50 3 feature.

11:50 4 Q. Well, let's see.

11:50 5 MR. LEE: Could I have DDX-19.11 on the screen?

11:50 6 BY THE WITNESS:

11:50 7 A. Oh, I see. Yes. I disagree with that.

11:50 8 BY MR. LEE:

11:50 9 Q. Yes. Dr. Rotem says that the Lake series of
11:50 10 processors, using his revolutionary algorithms that led to his
11:50 11 Ph.D. thesis, is totally different from Yonah, correct?

11:50 12 A. I don't disagree with that.

11:50 13 Q. Right. Now, if we -- he also testified that it is
11:51 14 totally autonomous. We don't get any requests, correct?

11:51 15 A. I disagree with that.

11:51 16 Q. So Dr. Rotem says no request; you say a request,
11:51 17 correct?

11:51 18 A. That's correct.

11:51 19 MR. LEE: Let's turn to DDX-19.12.

11:51 20 BY MR. LEE:

11:51 21 Q. Now, we're looking at Mr. Borkowski's testimony. Do
11:51 22 you see that?

11:51 23 A. Yes.

11:51 24 Q. And again he designed some of the P-code, right?

11:51 25 A. Yes. I see that.

11:51 1 Q. Now, when he was asked whether the PCU requested
11:51 2 information, he said, "No. It doesn't... There's no explicit
11:51 3 trigger."

11:51 4 You disagree, correct?

11:51 5 A. Not exactly.

11:51 6 Q. Okay. Well, we'll let the testimony stand. But we
11:51 7 do agree on the request issue, you disagree with Dr. Rotem,
11:51 8 correct?

11:51 9 A. Not precisely.

11:51 10 Q. Well, let's go back and look at it.

11:51 11 A. Okay.

11:51 12 MR. LEE: Can I have the prior demonstrative, please?

11:52 13 BY MR. LEE:

11:52 14 Q. Dr. Rotem: "We don't get any request."

11:52 15 Dr. Conte: "So there is a request as required by the
11:52 16 claims?"

11:52 17 "There is."

11:52 18 That's the testimony the jury heard last week, correct?

11:52 19 A. Yes. I believe so.

11:52 20 Q. All right. Now, let me go to another issue to
11:52 21 explore your agreement or disagreement -- withdrawn.

11:52 22 You've talked extensively today about your disagreement
11:52 23 with Dr. Sylvester, correct?

11:52 24 A. Among other things. Yes.

11:52 25 Q. And with Dr. Grunwald, correct?

11:52 1 A. Among other things. Yes.

11:52 2 Q. I thought I was listening carefully this morning, but
11:52 3 I didn't hear you mention Dr. Rotem, Mr. Borkowski or
11:52 4 Mr. Douglas. And I want to focus upon them, okay?

11:52 5 A. Okay.

11:52 6 MR. LEE: Now, let me bring up DDX-9.15 if I could,
11:52 7 Dr. Conte.

11:52 8 BY MR. LEE:

11:52 9 Q. This is the testimony you gave on one-to-one
11:53 10 relationships. Do you recall that?

11:53 11 A. I do.

11:53 12 Q. And this is an assumption -- or this is information
11:53 13 that you provided to Dr. Sullivan that is part of his six-step
11:53 14 damages analysis, correct?

11:53 15 A. Yes.

11:53 16 Q. You say that there's a one-to-one relationship, power
11:53 17 to speed, correct?

11:53 18 A. Yes.

11:53 19 Q. Dr. Rotem said that's not true. It's much more
11:53 20 complicated than that, correct?

11:53 21 Is that what he said, sir?

11:53 22 A. That's what he said here.

11:53 23 Q. Right. So just so we're clear, on the '759 patent,
11:53 24 on the question of requests, you and Dr. Rotem disagree,
11:53 25 correct?

11:53 1 A. Not entirely, but in -- with the testimony you
11:53 2 pointed to, yes.

11:53 3 Q. And we can agree that the claim term specifically
11:54 4 requires a request, correct?

11:54 5 A. It does.

11:54 6 Q. And if Dr. Rotem is correct and there is no request,
11:54 7 there's no infringement, correct?

11:54 8 A. I can't conclude that one way or another. Sorry.

11:54 9 Q. You don't know?

11:54 10 A. I can't conclude that one way or another. Sorry.

11:54 11 Q. So let me ask again: If Dr. Rotem is correct and
11:54 12 there is no request, is there or is there not infringement?

11:54 13 A. Again, I can't conclude that one way or another.

11:54 14 Q. And if I go back to the '373 patent, if the
11:54 15 minimum -- if the RING_RETENTION_VOLTAGE is, in fact, not a
11:54 16 minimum as Mr. Douglas said, there is no infringement, correct?

11:54 17 A. Again, I cannot answer that one way or the other.

11:54 18 Q. All right. So let me just ask you a few questions
11:54 19 before I finish on the question of invalidity.

11:55 20 You understand that there's no dispute among the parties
11:55 21 that Yonah came first, correct?

11:55 22 A. I don't believe that's true.

11:55 23 Q. You don't -- didn't anyone tell you that the parties
11:55 24 met with His Honor and agreed that it was prior art?

11:55 25 THE COURT: Counsel.

11:55 1 BY THE WITNESS:

11:55 2 A. At the time of my report, that wasn't an agreement.

11:55 3 I'm sorry.

11:55 4 BY MR. LEE:

11:55 5 Q. Okay. I'm not talking about the time of your report.

11:55 6 I'm talking about March 1st, 2021 in this trial. Did you know
11:55 7 that the parties have reached the agreement that Yonah came
11:55 8 first?

11:55 9 A. I did not know that. Thank you for informing me.

11:55 10 Q. All right. So I'm going to represent to you that
11:55 11 that's the agreement, Yonah indisputably came first. Do you
11:55 12 have that in mind?

11:55 13 A. I have in mind the parties agreed to that.

11:55 14 Q. Now, you actually had taken a position in your report
11:55 15 to the contrary, correct?

11:55 16 A. I had.

11:55 17 Q. So your report disagrees with what the parties have
11:55 18 agreed to for this case, correct?

11:55 19 A. In that one instance. Yes.

11:56 20 Q. Yeah. And I want to ask you just a couple more
11:56 21 questions about what occurred at the Patent Office on the '759
11:56 22 patent.

11:56 23 You understand there's a difference between SpeedStep,
11:56 24 SpeedStep in Yonah, and Speed Shift, don't you?

11:56 25 A. You're asking if there's a difference between those

11:56 1 three things?

11:56 2 Q. Yes.

11:56 3 A. Yes. There's a difference between those three
11:56 4 things.

11:56 5 Q. SpeedStep existed before Yonah, correct?

11:56 6 A. It did.

11:56 7 Q. Yonah had SpeedStep in a two-core processor, correct,
11:56 8 in the two-core microprocessor, correct?

11:56 9 A. Yes. What was different was that Yonah had two
11:56 10 cores.

11:56 11 Q. Right. And I'm going to take you now to the document
11:56 12 that Mr. Chu showed Dr. Grunwald on Friday afternoon.

11:56 13 MR. LEE: Could I have PTX-008-A at Page 68?

11:56 14 BY MR. LEE:

11:57 15 Q. Now, Mr. Chu was asking Dr. Grunwald whether the
11:57 16 Patent Office had before it SpeedStep. Do you recall that?

11:57 17 A. Yes.

11:57 18 Q. He didn't ask whether it had before it Yonah,
11:57 19 correct?

11:57 20 A. Correct.

11:57 21 Q. And he focused just on this first paragraph, under
11:57 22 the title "Intel Pentium III with enhanced SpeedStep
11:57 23 Technology." Do you see that?

11:57 24 A. I see that.

11:57 25 Q. And he asked Dr. Grunwald some questions about the

11:57 1 first paragraph and the first paragraph only.

11:57 2 A. I believe so. I can't recall.

11:57 3 MR. LEE: Could I go down to -- and ask to blow up a
11:57 4 paragraph that was not discussed, "0.18 Micron Technology."

11:57 5 BY MR. LEE:

11:57 6 Q. Do you see that?

11:57 7 A. Yes.

11:57 8 Q. If I look at the last sentence, it says, "This
11:58 9 innovation makes it possible for CPUs to include up to
11:58 10 28.1 million transistors in the core."

11:58 11 The product that was before the Patent Office was a
11:58 12 single-core product, correct?

11:58 13 A. Yes.

11:58 14 Q. There is no evidence in the record at all that the
11:58 15 two-core product called Yonah was before the Patent Office; is
11:58 16 that not correct?

11:58 17 A. That's correct.

11:58 18 Q. Now, just a few more questions on Yonah. You agree
11:58 19 it had two cores, correct?

11:58 20 A. Yes.

11:58 21 Q. You agree that it had a clock, correct?

11:58 22 A. Yes.

11:58 23 Q. You agree that the clock generated a clock frequency,
11:58 24 correct?

11:58 25 A. Yes.

11:58 1 Q. You agree that in Yonah software had ultimate control
11:58 2 over frequency changes, correct?

11:58 3 A. The operating system, yes.

11:58 4 Q. Yeah. Fair enough. It's an operating system,
11:58 5 correct?

11:58 6 A. Yes.

11:58 7 Q. And the operating system was executed in the cores of
11:59 8 Yonah, correct?

11:59 9 A. Yes.

11:59 10 Q. And it was that operating system in Yonah that made
11:59 11 requests for changes in frequency, correct?

11:59 12 A. Well, it asked the hardware to change the
11:59 13 frequencies. Yes.

11:59 14 Q. Okay.

11:59 15 MR. LEE: Now, could I have the '759 patent?

11:59 16 And could I have Columns 2 -- Column 2, Line 51 to 57?

11:59 17 BY MR. LEE:

11:59 18 Q. Do you recall reviewing this portion of the patent?

11:59 19 A. Yes.

11:59 20 Q. Okay. And this portion refers specifically to
11:59 21 firmware, correct?

11:59 22 A. Yes.

11:59 23 Q. And it also refers specifically to software, correct?

12:00 24 A. Yes.

12:00 25 Q. Now, you would agree with me that Yonah had something

12:00 1 called a PLL or phase-locked loop, correct?

12:00 2 A. Yes.

12:00 3 Q. It had one, correct?

12:00 4 A. I don't recall.

12:00 5 Q. You don't recall one way or another?

12:00 6 A. It probably had one. Yes.

12:00 7 Q. It had one that provided common clock control to all
12:00 8 of Yonah, correct?

12:00 9 A. I believe that's correct. Yes.

12:00 10 Q. Thank you.

12:00 11 MR. LEE: Nothing further, Your Honor.

12:00 12 THE COURT: Thank you, Mr. Lee. Counsel?

12:00 13 MR. HEINRICH: I have about 20 minutes to half an hour.

12:00 14 Should we break for lunch now or should we break later?

12:00 15 THE COURT: I think we need to continue to go.

12:00 16 MR. LEE: 20 minutes to half an hour on redirect?

12:00 17 THE COURT: Redirect is going to be limited to what
12:00 18 Mr. Lee raised.

12:00 19 MR. HEINRICH: Understood. Should we do that now?

12:00 20 THE COURT: Ladies and gentlemen of the jury, which would
12:00 21 you prefer to do? Lunch now or finish with this witness?

12:01 22 JUROR: Finish.

12:01 23 THE COURT: Let's finish.

12:01 24 MR. HEINRICH: Okay.

12:01 25 REDIRECT EXAMINATION

12:01 1 BY MR. HEINRICH:

12:02 2 Q. Hello again, Professor Conte. So just taking up
12:02 3 where Mr. Lee left off, he showed you a passage from the patent
12:02 4 that referred to software or hardware. Do you recall that?

12:02 5 A. Yes. I do.

12:02 6 Q. Now, to do a proper validity analysis, is it your
12:02 7 understanding that you have to compare the prior art to a
12:02 8 passage in the specification, or do you have to compare it to
12:02 9 the claim?

12:02 10 A. You compare it to the claim.

12:02 11 Q. And Claim 14 in the asserted claims, are they
12:02 12 referring to a software implementation, or are they referring
12:02 13 to an implementation in a programmable clock controller with
12:03 14 embedded computer program?

12:03 15 A. They're referring to the latter, in hardware.

12:03 16 Q. And does anything with -- that Mr. Lee pointed to
12:03 17 change your opinion that Yonah doesn't have a programmable
12:03 18 clock controller with an embedded computer program?

12:03 19 A. No. It does not.

12:03 20 Q. And does that mean that Yonah is missing a number of
12:03 21 limitations of the claims of the '759 patent?

12:03 22 A. Yes.

12:03 23 MR. LEE: Your Honor, I'm going to object. This is
12:03 24 redirect and he's just leading him. He's not asking questions.

12:03 25 THE COURT: Well, to the extent he's asking what you said

12:03 1 and filling that in, I'm okay with. But generally speaking, I
12:03 2 will not let him lead. But I think you're -- I'll overrule
12:03 3 that objection. But I appreciate it.

12:03 4 MR. HEINRICH: So let's turn to SpeedStep.

12:03 5 BY MR. HEINRICH:

12:03 6 Q. And Mr. Lee pointed you to the SpeedStep document
12:04 7 that was cited in prosecution of the '759 patent. Do you
12:04 8 recall that?

12:04 9 A. Yes. I do.

12:04 10 Q. Now, did that -- how did that implementation of
12:04 11 SpeedStep work in relationship to what you explained to the
12:04 12 jury today?

12:04 13 A. That SpeedStep implementation worked identical to how
12:04 14 it worked in Yonah.

12:04 15 Q. And what was making the decisions under the SpeedStep
12:04 16 implementation that was disclosed to the Patent Office during
12:04 17 the prosecution of the '759 patent?

12:04 18 A. That was the operating system. That was Windows.
12:04 19 That was what Microsoft makes in Redmond, Washington.

12:04 20 Q. Now, was that cited application of SpeedStep, did
12:04 21 that have a programmable clock controller with an embedded
12:04 22 computer program?

12:04 23 A. No. It did not.

12:04 24 Q. Any more than Yonah did?

12:05 25 A. Correct. No more than Yonah did.

12:05 1 Q. Okay. So you were asked -- so does it matter, for
12:05 2 purposes of the mechanism of speed control, whether there's one
12:05 3 core or two cores or four cores?

12:05 4 A. No. It does not.

12:05 5 Q. Now, you were asked some questions about Mr. Douglas'
12:05 6 testimony. Do you recall that?

12:05 7 A. I do.

12:05 8 Q. And one of the questions you were asked was about
12:05 9 Mr. Douglas, who was comparing V0 to the
12:05 10 RING_RETENTION_VOLTAGE. Do you recall his testimony on that --
12:05 11 on that point?

12:05 12 A. I do.

12:05 13 Q. And he made a graph during the course of his
12:05 14 testimony purporting to show the relative levels?

12:06 15 A. I recall that. Yes.

12:06 16 Q. And is there a simple disagreement between you and
12:06 17 Mr. Douglas or something else?

12:06 18 A. It's much more than that.

12:06 19 Q. Can you explain?

12:06 20 A. Yes. Like I said, it -- how can you operate a
12:06 21 circuit below the retention voltage of the memory? Your memory
12:06 22 wouldn't work.

12:06 23 Q. And how does Mr. Douglas' graph that he showed relate
12:06 24 to Dr. Sylvester's?

12:06 25 A. They're extremely close.

12:06 1 Q. And did Mr. Douglas make the same error that
12:06 2 Dr. Sylvester made?

12:06 3 A. I can only conclude he did.

12:06 4 Q. When the values are compensated, what's the
12:06 5 relationship between V0 and RING_RETENTION_VOLTAGE?

12:06 6 A. When you compensate them with equations that were in
12:06 7 that very document we were looking at, you'll end up with V0
12:06 8 always above RING_RETENTION_VOLTAGE.

12:06 9 Q. And -- and what did you do to study the relative
12:07 10 levels of these values and the ring retention levels in
12:07 11 particular?

12:07 12 A. I examined the actual P-code.

12:07 13 Q. And what is that?

12:07 14 A. That is the code running on the -- again, on the
12:07 15 programmable clock controller that includes the PCU in the case
12:07 16 of the Skylake products.

12:07 17 Q. Did you rely solely on Exhibit 505 for your analysis?

12:07 18 A. I did not.

12:07 19 Q. Now, Mr. Lee showed you some other portions of
12:07 20 Exhibit 505 that said TBD. Do you recall that?

12:07 21 A. I do.

12:07 22 Q. Does -- do those other portions relate to that graph
12:07 23 that we -- we saw?

12:07 24 A. I don't believe so. No.

12:07 25 Q. The fact that other -- there's other references of

12:07 1 TBD in that document, does it change the fact that V0 is above
12:08 2 the RING_RETENTION_VOLTAGE when it's calibrated
12:08 3 apples-to-apples?

12:08 4 A. It doesn't. Because, again, I verified with the code
12:08 5 that's in the PCU.

12:08 6 Q. So what is "TBD," by the way?

12:08 7 A. To be determined.

12:08 8 Q. Does -- does that -- you mentioned that you saw
12:08 9 mostly drafts of Intel documents. Do they still provide
12:08 10 meaningful information that experts, such as yourself, can rely
12:08 11 on reliably?

12:08 12 A. Yes. They do.

12:08 13 Q. Okay. So you were shown some slides and you offered
12:08 14 to explain in reference to some of Mr. Lee's questions -- why
12:08 15 don't we take a look at some of those.

12:09 16 MR. HEINRICH: Can we pull up DDX-19.7, for example?

12:09 17 BY MR. HEINRICH:

12:09 18 Q. So --

12:09 19 A. I don't -- I don't see it.

12:09 20 Q. Hopefully it'll come on in a moment.

12:09 21 A. I see it. Okay.

12:09 22 Q. And I believe you were asked if you simply disagreed
12:09 23 with Mr. Douglas, and you offered to explain. Do you recall
12:09 24 that?

12:09 25 A. Yes.

12:09 1 Q. And can you explain for us?

12:09 2 A. Yeah. If you remember me talking about this, Intel
12:09 3 drains that tank and they ramp it down slowly. And when
12:10 4 they're done, they know that voltage remains at zero throughout
12:10 5 the time that they have the CLR domain sleeping.

12:10 6 So they've controlled it when it's up. They control it
12:10 7 when it ramps down, and they control it when it's zero.

12:10 8 Q. And what's that conclusion based on, Professor Conte?

12:10 9 A. That conclusion is based on looking at the source
12:10 10 code. It's based on also looking at Intel documents.

12:10 11 Q. Okay. So you were also asked about some testimony
12:10 12 from Dr. Rotem.

12:10 13 MR. HEINRICH: And let's go to DDX-19.11.

12:10 14 BY MR. HEINRICH:

12:10 15 Q. And, again, you offered to explain, and can you do
12:10 16 that here, sir?

12:10 17 A. Yes. So I think what he's talking about here is he's
12:10 18 looking at it from the standpoint of the C0 residency counters.
12:11 19 And when you only go that far, then we can say, well, there's
12:11 20 no request. But you got to remember, those counters are going
12:11 21 to be adjusted because you get the C's -- this Core_Active
12:11 22 signal from the cores.

12:11 23 So we actually, I think, don't exactly disagree. It just
12:11 24 depends on what part of the system you're looking at.

12:11 25 Q. And, again, did you base your analysis on the source

12:11 1 code of Intel's products?

12:11 2 A. I did.

12:11 3 Q. And did you examine in particular the source code for
12:11 4 that Core_Active request?

12:11 5 A. I did.

12:11 6 Q. Is the Core_Active request telemetry information?

12:11 7 A. Yes.

12:11 8 Q. Now, do you recall Dr. Grunwald's testimony about a
12:11 9 request being able to constitute a statement of condition? Do
12:12 10 you recall that?

12:12 11 A. Yes. I do.

12:12 12 Q. And how does that relate to what counsel's calling a
12:12 13 disagreement between you and Dr. Rotem?

12:12 14 A. Well, it is correct as a statement of condition,
12:12 15 right? It's saying the core is active.

12:12 16 So Dr. Rotem is saying that's not a request. He's looking
12:12 17 only at the core -- the C0 residency counters.

12:12 18 But think about it this way: These counters change as you
12:12 19 go through these windows. So imagine you start at the window
12:12 20 with a five in one of those counters; and you go all the way to
12:12 21 the end of the window, and at the end, it's five.

12:12 22 Then you go to the next window, and during the next window
12:12 23 there's a Core_Active and it goes six, seven, eight, nine, ten,
12:12 24 and then you end.

12:12 25 So what Dr. Rotem is not considering a request is really

12:12 1 the fact that the counter from this window to this window
12:12 2 actually changes. But if you recall, there was a lot of talk
12:12 3 about that on Tuesday. And I said that that's indicative of a
12:13 4 request.

12:13 5 Q. And if one were to accept Dr. Grunwald's
12:13 6 acknowledgement that a statement of condition can be a request,
12:13 7 then what's your conclusion?

12:13 8 A. Then I also agree that this -- Lake products
12:13 9 infringe.

12:13 10 Q. Okay. Finally, you were asked some questions about
12:13 11 your opinions regarding the conservative estimate of a
12:13 12 one-to-one power savings speed or performance in speed idea.
12:13 13 Do you recall that?

12:13 14 A. I do.

12:13 15 Q. And during your testimony -- or during your direct
12:13 16 testimony you pointed to one source of evidence on that,
12:13 17 PTX-3523.

12:13 18 MR. HEINRICH: Why don't we pull that up?

12:14 19 You know what? Why don't we do this. Why don't we pull
12:14 20 up PDX-4.115, which was Professor Conte's demonstratives from
12:14 21 last week.

12:14 22 BY THE WITNESS:

12:14 23 A. Okay. Here we are.

12:15 24 BY MR. HEINRICH:

12:15 25 Q. And whose paper were you relying on in part for your

12:15 1 opinion on this subject?

12:15 2 A. Dr. Rotem's paper.

12:15 3 MR. HEINRICH: And can we go to the passage in the paper
12:15 4 that refers to the one-to-one ratio?

12:15 5 BY THE WITNESS:

12:15 6 A. Here -- actually, can we go a little further than
12:15 7 that? Just I need that next line. That's good. That's good.

12:15 8 Okay. Here it is. So "IPC features that caused
12:15 9 one-to-one ratio of power to IPC." That is talking -- IPC
12:15 10 means instructions per cycle. So that means speed. How many
12:15 11 instructions are you doing per cycle? And he's saying it's a
12:15 12 one-to-one ratio of power to speed in his own paper.

12:15 13 BY MR. HEINRICH:

12:15 14 Q. And, again, that's Dr. Rotem, right?

12:15 15 A. That's Dr. Rotem, yes.

12:15 16 Q. Now, is Dr. Rotem saying this in the context of this
12:16 17 litigation or is he saying that outside the context of this
12:16 18 litigation?

12:16 19 A. He's saying that outside the context of this
12:16 20 litigation. And this references the time frame of Haswell and
12:16 21 Broadwell, I should indicate.

12:16 22 Q. So -- and is there a disagreement between you and
12:16 23 what Dr. Rotem wrote at the relevant time period outside of
12:16 24 litigation?

12:16 25 A. No.

12:16 1 Q. Okay.

12:16 2 MR. HEINRICH: Thank you very much, Professor Conte.

12:16 3 THE COURT: Mr. Lee?

12:16 4 RE CROSS-EXAMINATION

12:16 5 BY MR. LEE:

12:17 6 Q. Just a few more questions, Dr. Conte.

12:17 7 You were just criticizing Mr. Douglas' chart. Do you
12:17 8 remember that?

12:17 9 A. Yes.

12:17 10 Q. Now, Mr. Douglas came and took the same stand that
12:17 11 you're testifying from, correct?

12:17 12 A. That's correct.

12:17 13 Q. He was cross-examined, correct?

12:17 14 A. That's correct.

12:17 15 Q. He was never asked a single question about that chart
12:17 16 on cross-examination, was he?

12:17 17 A. He was not. No.

12:17 18 Q. And, you know, now that you're criticizing the chart,
12:17 19 he doesn't get a chance to come back and answer your
12:17 20 criticisms, correct?

12:17 21 A. That's my understanding. Yes.

12:17 22 Q. Because no one asked him about it on
12:17 23 cross-examination, correct?

12:17 24 A. They didn't ask him. No.

12:17 25 Q. Right. And they didn't ask Dr. Sylvester either, did

12:17 1 they?

12:17 2 A. That's incorrect.

12:17 3 Q. Well, they didn't ask Dr. Sylvester about

12:18 4 Mr. Douglas' chart, did they?

12:18 5 A. That's incorrect.

12:18 6 Q. All right. Fair enough.

12:18 7 So what we can agree about is, they didn't ask Mr. Douglas

12:18 8 about the chart he prepared for the jury that you're

12:18 9 criticizing for the first time today, correct?

12:18 10 A. That's correct.

12:18 11 Q. Now, you said you reviewed the P-code, correct?

12:18 12 A. That's correct.

12:18 13 Q. Mr. Borkowski wrote the P-code, didn't he?

12:18 14 A. My understanding is he wrote a large portion of it.

12:18 15 MR. LEE: And can I have lastly DDX-19.15?

12:18 16 BY MR. LEE:

12:18 17 Q. You know that in Dr. Rotem's testimony he actually

12:18 18 explained exactly the portion of his thesis and article that

12:18 19 you were just discussing with Mr. Heinrich, correct?

12:18 20 A. I don't recall one way or the other.

12:18 21 Q. And after having considered what he had written when

12:18 22 he disclosed his revolutionary idea, he said that there's no

12:19 23 one-to-one relationship, correct?

12:19 24 A. At the time frame he was indicating, I believe that's

12:19 25 correct.

12:19 1 Q. Now, since you've referred several times to
12:19 2 Dr. Rotem's Ph.D. dissertation, correct?

12:19 3 A. I don't think I actually have.

12:19 4 Q. Have you referred to the article?

12:19 5 A. Yes.

12:19 6 Q. Have you seen any articles or publications or Ph.D.
12:19 7 theses written by the inventors of the '373 patent?

12:19 8 A. I don't recall one way or the other.

12:19 9 Q. The '759 patent?

12:19 10 A. Again, same answer.

12:19 11 Q. The -- after the hundreds of hours of work you've
12:19 12 done, you cannot identify for us a single article or
12:19 13 publication that would describe either of those two patents as
12:19 14 stars or revolutionary, the way that Dr. Rotem described his
12:19 15 own invention, correct?

12:19 16 A. Wow. I don't quite understand your question. I'm
12:19 17 sorry.

12:19 18 Q. Okay. If you can't answer it, you can't answer it.

12:20 19 MR. LEE: Nothing further, Your Honor.

12:20 20 THE COURT: You may step down, Doctor.

12:20 21 THE WITNESS: Thank you.

12:20 22 THE COURT: Ladies and gentlemen of the jury, it is -- if
12:20 23 you all will give me one second. Mr. Lee, if I could have you
12:20 24 and Mr. Chu up here for just one second.

12:20 25 (Bench conference.)

12:20 1 THE COURT: So plaintiff has one witness left, right?

12:20 2 MR. CHU: Yes. And it'll be short.

12:20 3 THE COURT: So I think that takes care of our time. So

12:20 4 it's 12:20. I'm going to have the jury come back at 2:00.

12:20 5 Here's why. We have issues to take up before the jury charge.

12:21 6 I will put the witness on, which we'll get done and then we'll

12:21 7 have everything done.

12:21 8 At 2:00 we'll put on the witness. As soon as the witness

12:21 9 is done -- and you also can make your record during this period

12:21 10 of time on the motions. As soon as you're done with your

12:21 11 witnesses, you're going to rest -- or I think we're going to do

12:21 12 the charge and then closing arguments. That way they don't sit

12:21 13 around waiting for us for the charge.

12:21 14 MR. LEE: Okay.

12:21 15 THE COURT: We will -- I'm holding you with your two --

12:21 16 it'll be short. I will encourage you if I see that it's not

12:21 17 going too short.

12:21 18 MR. CHU: Yes. Charlotte Wen, junior lawyer -- Charlotte

12:21 19 Wen, who is a junior lawyer in our office, is going to be

12:21 20 handling the witness. And she assures me it's going to be

12:21 21 short and to the point.

12:21 22 THE COURT: Very good. I will encourage her.

12:22 23 MR. CHU: Okay. Thank you.

12:22 24 MR. LEE: I'm smiling. You just can't see it.

12:22 25 (Laughter.)

12:22 1 (Bench conference concludes.)

12:22 2 THE COURT: Ladies and gentlemen, if I were to use an
12:22 3 analogy, we are rounding the curve and headed for home. We
12:22 4 have one more witness, and then I will give you a -- I will
12:22 5 read to you what the law is. You'll understand that more as I
12:22 6 read it to you. And then we will have closing arguments in the
12:22 7 case.

12:22 8 We have a little bit of housekeeping to do, and I think
12:22 9 you all -- it'd be better -- are you all staying in while --
12:22 10 during lunch anyway? Are you all here?

12:22 11 I think we will need until 2:00 so that we're organized
12:22 12 with everything. But I will tell you, since you're here
12:22 13 anyway, as soon as we are wrapped up and ready to go, we will
12:22 14 bring you back in. We'll have the witness, we'll have the jury
12:23 15 charge and we'll have the closing arguments. And then we'll
12:23 16 talk about what to do thereafter given the lateness of the
12:23 17 hour.

12:23 18 But you should count on enjoying your lunch. And then we
12:23 19 will do what we need to do to ministerially and then we'll get
12:23 20 started, but we will finish today. And then your
12:23 21 deliberations, as I've said repeatedly, will be entirely up to
12:23 22 you all with the length of time. There's no -- there is no
12:23 23 limit on that. That's entirely up to you to come up with a
12:23 24 unanimous verdict.

12:23 25 Remembering -- this is the last time you get to hear this.

12:23 1 Remembering my instructions not to discuss the case amongst
12:23 2 yourselves, I will dismiss you. The next time I dismiss you,
12:23 3 it will be exactly the opposite, unless we break for the
12:23 4 evening and then you'll wait on that. But the next time you
12:23 5 all get together will be for deliberations.

12:23 6 So please -- you are excused until 2:00.

12:23 7 THE BAILIFF: All rise.

12:24 8 (Jury exited the courtroom at 12:24.)

12:24 9 THE COURT: You may be seated, Counsel.

12:24 10 If you'd like to go ahead, so I don't forget it, and
12:24 11 quickly make your motions on the record that would have been
12:24 12 made at the end of defendant's case. Mr. Lee, Mr. Chu.

12:24 13 MR. LEE: Your Honor, under Rule 50A, we renew the
12:24 14 previously made and previously denied without prejudice motion
12:24 15 on all issues as to which VLSI carries the burden of proof,
12:24 16 infringement, willfulness and damages.

12:24 17 There are two things I would like to specifically point
12:24 18 out for the record.

12:24 19 THE COURT: Yes, sir.

12:24 20 MR. LEE: There are two things I'd like to specifically
12:24 21 point out for the record. One is the Doctrine of Equivalents
12:24 22 for the '373 patent. There has been no evidence on the
12:24 23 Doctrine of Equivalents for the '373 patent.

12:25 24 I think Mr. Chu could say that they're withdrawing that
12:25 25 claim, and if so, we should get JMOL now. And the second issue

12:25 1 is --

12:25 2 THE COURT: If he does, then I'll grant that.

12:25 3 MR. LEE: And second is willful infringement, which I know
12:25 4 Your Honor addressed during the charging conference. But
12:25 5 whether it's pre-suit or post-suit, we claim that there is
12:25 6 insufficient evidence for the issue of willfulness to go to the
12:25 7 jury. And then --

12:25 8 THE COURT: And, Mr. Lee, let me tell you now, I am going
12:25 9 to allow that -- I've made my decision, and I am going to allow
12:25 10 willfulness to go to the jury.

12:25 11 MR. LEE: Okay. Fair enough, Your Honor.

12:25 12 And then we will amplify this in written form.

12:25 13 And we would also move for JMOL on the invalidity of the
12:25 14 '759 asserted patent claims because it's now undisputed, I'm
12:25 15 pretty sure, that Yonah is prior art and that it satisfies each
12:25 16 and every limitation of the asserted claims.

12:25 17 Thank you, Your Honor.

12:25 18 THE COURT: Mr. Chu? I don't need a response to any of
12:26 19 his motions. Just if you have a motion yourself.

12:26 20 MR. CHU: Yes. I'll be very brief orally and we'll follow
12:26 21 it up with a written motion.

12:26 22 VLSI is moving for judgment as a matter of law because a
12:26 23 reasonable jury would not have a legally sufficient evidentiary
12:26 24 basis to return a verdict in favor of the defendant Intel.
12:26 25 This includes the claims of infringement, willfulness,

12:26 1 Intel's -- all of Intel's noninfringement invalidity and
12:26 2 unclean hands defenses and counterclaims and any and all other
12:26 3 claims, theories and defenses that were presented at trial by
12:26 4 either of the parties.

12:26 5 So we make this short motion to preserve our position. We
12:26 6 will be filing a written motion. And then I have a 30-second
12:26 7 item on a completely separate subject.

12:26 8 THE COURT: Let me first take the time to overrule all the
12:26 9 motions that are pending.

12:26 10 Yes, sir.

12:27 11 MR. CHU: With Intel's permission and the Court's
12:27 12 permission, my assistant has brought to the Court cupcakes for
12:27 13 the jurors. And if the Court is comfortable just stating that
12:27 14 the parties jointly -- for in the afternoon, not for lunch, but
12:27 15 in the afternoon when they may be hearing the Court's jury
12:27 16 instructions and then Mr. Lee's riveting closing argument and
12:27 17 my sleeper of a closing argument, before that, they might want
12:27 18 to partake.

12:27 19 THE COURT: Mr. Lee, do you have any objection to that?

12:27 20 MR. LEE: We'll pay half the cost of the cupcakes.

12:27 21 (Laughter.)

12:27 22 THE COURT: I just think it's presumptuous of Mr. Chu to
12:27 23 believe that you're the one, Mr. Lee, that's going to do the
12:27 24 closing argument, but maybe you told him already that you are
12:27 25 going to.

12:27 1 MR. LEE: It is, because my colleague here is going to do
12:27 2 some significant portion.

12:28 3 THE COURT: I understand. Yes. We'll -- Mr. Chu, that
12:28 4 sounds wonderful.

12:28 5 I think you will find that the only issues we have left to
12:28 6 take up when we get back at 1:30 are the issues of the jury
12:28 7 charge with regard to damages. I have dealt with the other
12:28 8 issues and hopefully my law clerk has told you how I've dealt
12:28 9 with them. To the extent there were still controversies, we'll
12:28 10 take those up at 1:30 and resolve those.

12:28 11 Assuming -- I'd like to -- Mr. Chu, just because you're up
12:28 12 there, that's what I think we have left to resolve. Do you
12:28 13 have any reason to think I'm wrong?

12:28 14 MR. CHU: I'm advised that the only open issues are the
12:28 15 jury instructions.

12:28 16 THE COURT: Well, I get that, but I'm saying the only ones
12:29 17 I think there are issues on are Instructions No. 34 and
12:29 18 Instruction No. 35.

12:29 19 (Conference between counsel.)

12:29 20 MR. CHU: Yes.

12:29 21 THE COURT: Okay. Very good. Because I want to make sure
12:29 22 we have enough time.

12:29 23 So we will resume at 1:30 with discussions over the jury
12:29 24 charge. I'll make my rulings. We can get that -- yes, sir.

12:29 25 MR. TOMPROS: Your Honor, I apologize. I think there

12:29 1 actually are two other instructions, 34 and 35 -- Your Honor,
12:29 2 34 and 35 are two where you had reserved judgment. I think you
12:29 3 had also reserved judgment on 33.

12:29 4 THE COURT: Let me look.

12:29 5 MR. TOMPROS: And then on 24, that was the one where Your
12:29 6 Honor was going to look at the willful -- oh, go ahead.

12:29 7 THE COURT: On 33, your -- maybe Evan hasn't gotten it to
12:29 8 you. I have rewritten 33. Essentially what it is going to say
12:30 9 is -- I'm paraphrasing whatever I've given you now.

12:30 10 Essentially it's going to be party neutral and say something
12:30 11 like: If you find that anyone failed to do something, you can
12:30 12 hold that against whichever party failed to do it. I don't
12:30 13 name Intel. But during closing, the lawyers are free to say --
12:30 14 be more robust.

12:30 15 If -- Mr. Chu, if you believe, or anyone believes, that
12:30 16 the other side did this, but in my charge it will not say
12:30 17 Intel.

12:30 18 MR. TOMPROS: Thank you, Your Honor.

12:30 19 THE COURT: With regard to willfulness, I'm going to
12:30 20 give -- I am going to give a willfulness charge. Is there an
12:30 21 issue over what that is?

12:30 22 MR. TOMPROS: There is, Your Honor. There's still the
12:30 23 open question -- that was my one other point, so thank you,
12:30 24 Your Honor. There's an open question as to whether the willful
12:30 25 blindness --

12:30 1 THE COURT: Tell me what page you're on, because I --

12:30 2 MR. TOMPROS: I am on Page 29 of the instructions, and I
12:30 3 think --

12:30 4 THE COURT: I know what I'm going to do there too.

12:30 5 MR. TOMPROS: Okay.

12:30 6 THE COURT: What I'm going to do on Page 29 is I'm going
12:31 7 to give the proposed instruction from VLSI with this exception,
12:31 8 the proposed sentence is: Willful blindness is just as
12:31 9 culpable as actual willfulness.

12:31 10 That is going to read in my charge: Willful blindness is
12:31 11 a factor to consider with respect to willfulness.

12:31 12 So here's what we need to accomplish when we get back,
12:31 13 though: We need to accomplish resolving what the damages
12:31 14 charge is going to be, and then we need to have enough time for
12:31 15 you all to quickly put on the record what your objections are.
12:31 16 You will then know. I won't be listening as though I'm going
12:31 17 to make any changes, but I'll make sure we have time.

12:31 18 As soon as we're done with that, we'll bring the jury back
12:31 19 in and we will resume with the next witness.

12:31 20 And then -- I'm sorry. And then I will read this as
12:31 21 quickly as I can. It's 47 pages. I actually may tell the jury
12:32 22 I'm going to try and read it quickly to save them some time.
12:32 23 They'll have a copy of it.

12:32 24 And then my plan is for each side to have 45 minutes per
12:32 25 side for closing.

12:32 1 If we -- depending on what time it is when I finish, if I
12:32 2 can give you all a little more time, I will. I would like to
12:32 3 get finished with everything no later than 6:00. That is my
12:32 4 thinking.

12:32 5 Mr. Chu?

12:32 6 MR. CHU: Yes. There is one other item.

12:32 7 THE COURT: Okay.

12:32 8 MR. CHU: We had filed a motion about the following:
12:32 9 During the course of the trial, there was some back and forth,
12:32 10 back and forth, it was a ping pong ball that had to do with the
12:32 11 Federal Circuit opinion in Wisconsin Alumni Research Foundation
12:32 12 versus Apple.

12:32 13 And Mr. Lee was reading from it and essentially was
12:32 14 arguing to the jury that -- against the credibility of
12:32 15 Professor Conte.

12:32 16 In fact, it was a claim construction issue. That's my
12:33 17 understanding of it, being very familiar with the case, and
12:33 18 that was Professor Conte's.

12:33 19 Our motion seeks to preclude both sides from arguing
12:33 20 before the jury the Federal Circuit opinion, what it means,
12:33 21 reading from it, and the like.

12:33 22 It may be said that we started down the path, but here's
12:33 23 what happened: Earlier in the trial, Intel brought up a fact
12:33 24 that Professor Conte had been engaged by several Irell clients.
12:33 25 In response to our questions, he said he understood one of the

12:33 1 reasons why VLSI engaged him. He testified before two Texas
12:33 2 juries where USAA had brought claims against Wells Fargo, and
12:33 3 he said something to the effect, I think, the verdicts were 250
12:33 4 million. They were actually 300 million. That -- to some of
12:34 5 us, that's still real money.

12:34 6 And then Mr. Lee got up and started reading parts of the
12:34 7 Federal Circuit opinion.

12:34 8 So I think it would just be unseemly for either side to be
12:34 9 arguing about the meaning of the Federal Circuit opinion.

12:34 10 THE COURT: Mr. Lee?

12:34 11 MR. LEE: Your Honor, you recall that they opened the
12:34 12 door. I objected. And you said to them: If you open the
12:34 13 door, it's open to both of us. They walked through with just
12:34 14 an oral recitation of the other cases.

12:34 15 I talked both orally and from the opinion. It's in the
12:34 16 record. And we're entitled to argue what's in the record.
12:34 17 There's nothing unseemly about it. And the quotes that I read
12:34 18 are directly from the Federal Circuit's opinion.

12:34 19 If they had not opened the door, as I said, Your Honor, we
12:34 20 wouldn't have done it. But having had them open the door and
12:34 21 suggesting that they're allowed to have these -- this
12:35 22 \$250 million verdict or more in the jury's memory but we're not
12:35 23 allowed to argue what we said in opposition would be very
12:35 24 prejudicial and unfair. You can't open the door and then
12:35 25 decide that you don't like what happened when the door got

12:35 1 opened.

12:35 2 THE COURT: I'm going to -- I'm going to deny Mr. Chu's
12:35 3 request. However, I'm going to limit you to speaking only as
12:35 4 to what was -- I'm not going to let you get into anything about
12:35 5 the case.

12:35 6 If something was asked or answered during the trial and I
12:35 7 allowed it in, you can refer to the record of what was said
12:35 8 during the trial specifically.

12:35 9 MR. LEE: That's my plan.

12:35 10 THE COURT: No one's going to read from that case. No
12:35 11 one's going to discuss the case. It's only whatever evidence
12:35 12 was admitted into the case and the question and answering
12:35 13 specifically.

12:35 14 MR. LEE: Everything that I'm going to say is in a
12:35 15 question or answer from Dr. -- between Dr. Conte and me.

12:35 16 MR. CHU: Your Honor, the problem is they were
12:36 17 disagreeing -- there's this Q and A between Mr. Lee and
12:36 18 Professor Conte.

12:36 19 Mr. Lee says: Isn't it that no reasonable jury could find
12:36 20 X?

12:36 21 Yes, the line is there. But it was a claim construction
12:36 22 issue in which the case turned.

12:36 23 Professor Conte then said: My understanding was claim
12:36 24 construction.

12:36 25 Mr. Lee reads more. Professor Conte goes back and forth.

12:36 1 THE COURT: And, Mr. Chu, you can put in that your witness
12:36 2 believed it was a claim construction issue. It -- whatever was
12:36 3 said during the trial can be -- I can't keep out -- I can't
12:36 4 keep aside from arguing what was admitted at trial. It's in
12:36 5 the record.

12:36 6 MR. CHU: Yeah. We do think --

12:36 7 THE COURT: I can't -- I can't fix that now by limiting it
12:36 8 now. It -- it's in the record.

12:36 9 MR. CHU: Okay. Just so the record's clear, we had
12:36 10 objected when Mr. Lee proceeded down this particular line. And
12:37 11 we do believe that the Court has discretion, in matters of this
12:37 12 kind, to limit or prevent lawyers from making arguments on
12:37 13 things that are so far afield. Even if it, in fact, "came in"
12:37 14 on questions and answers, but there was no affirmative
12:37 15 evidence.

12:37 16 THE COURT: Mr. Chu.

12:37 17 MR. CHU: He's just reading an opinion.

12:37 18 THE COURT: I -- if I admitted -- if I admitted something
12:37 19 into evidence over your objection, it's in evidence. And
12:37 20 whatever's in evidence is free to be discussed by either party.

12:37 21 Anything else?

12:37 22 MR. CHU: No, Your Honor.

12:37 23 THE COURT: We will be back -- I'll be back as close to
12:37 24 1:30 as I can.

12:37 25 THE BAILIFF: All rise.

12:37 1 (Recess taken from 12:37 to 1:37.)

01:37 2 THE BAILIFF: All rise.

01:37 3 THE COURT: Thank you. You may be seated.

01:37 4 Okie dokie. Just so you all know, I've made a decision
01:38 5 primarily motivated by the fact that we're having issues with
01:38 6 how we get the exhibits to the jury.

01:38 7 We are not going to be able -- there are a number of
01:38 8 exhibits we are not going to be able to load on the system
01:38 9 between now and when the jury starts deliberating tomorrow.

01:38 10 So if we have them on the system now, good. If we don't
01:38 11 have them on the system now, you all need to make -- get a
01:38 12 printed copy of everything we don't have, and we'll do it the
01:39 13 old-fashioned way with all the other exhibits. And that way
01:39 14 they'll have all the exhibits, the ones we have now, loaded --
01:39 15 they'll be loaded. The ones that are not loaded will be in
01:39 16 paper but they'll be available.

01:39 17 You all will need to do whatever magic you all need to do
01:39 18 to make sure they have all the exhibits physically available.
01:39 19 But because of that, whenever we finish today, I'm going to
01:39 20 tell them to go home. That way they won't begin deliberating
01:39 21 until they have all the exhibits.

01:39 22 So that being said, we have two issues to take up.
01:39 23 Mr. Chu, I'll begin with you or whoever's going to be speaking
01:39 24 on behalf of how we submit the damages.

01:39 25 Oh, yes, ma'am.

01:39 1 MS. PROCTOR: For the jury instructions?

01:39 2 THE COURT: Yes.

01:39 3 MS. PROCTOR: So, Your Honor, on the comparable license
01:40 4 instruction that's No. 33.

01:40 5 THE COURT: Okay.

01:40 6 MS. PROCTOR: Is it 33 -- or is it 34? 34 in yours, I
01:40 7 think, now.

01:40 8 So on 34, the comparable license issue, basically there
01:40 9 are two competing instructions. There's -- we proposed about a
01:40 10 paragraph; they proposed a longer instruction. And there are
01:40 11 two primary issues with what they have proposed.

01:40 12 THE COURT: Okay.

01:40 13 MS. PROCTOR: A lot of it overlaps. But theirs is -- it's
01:40 14 a good bit longer, and one of the things it includes that ours
01:40 15 does not is a discussion of an analogy to a house and
01:40 16 determining the value of a house.

01:40 17 And we just think that's improper, especially in light of
01:40 18 the analogies that their expert used. We don't want the Court
01:40 19 to be endorsing those kinds of comparisons.

01:40 20 THE COURT: I will tell you that I felt the same way
01:40 21 when -- after I heard -- I mean, I was agnostic when I read
01:40 22 both of them. I wasn't sure what the issue was. But having
01:40 23 heard the way that Intel put on their damages -- that, I
01:41 24 thought seemed inappropriate, given the analogy that they used.
01:41 25 I'll hear from counsel for Intel. But that -- that's my issue.

01:41 1 MR. TOMPROS: I think, Your Honor, at the end of the day
01:41 2 we could live without the house analogy, and that's okay, Your
01:41 3 Honor.

01:41 4 THE COURT: Okay.

01:41 5 MS. PROCTOR: Great. And so there's one other issue that
01:41 6 we think our instruction addresses more clearly here. And that
01:41 7 is the standard and the fact that the licenses have to actually
01:41 8 be comparable in order to be relevant. And so our instruction
01:41 9 includes the sentence, it's sort of near the end here, that if
01:41 10 they choose to rely upon evidence from any license agreements,
01:41 11 you must account for any differences between those licenses and
01:41 12 the hypothetically negotiated license. It goes on, in terms of
01:41 13 the technologies' economic circumstances.

01:41 14 THE COURT: Okay. Let me -- I don't mean to cut --
01:41 15 ordinarily I wouldn't cut you off. I've just -- for Intel, if
01:41 16 I were to give Intel's instruction minus the house analogy and
01:42 17 added the sentence that said -- began with, "However," to the
01:42 18 end of it or wherever, would Intel be okay with that?

01:42 19 MR. TOMPROS: That would be fine, Your Honor.

01:42 20 THE COURT: And I'm going to put it at the end unless you
01:42 21 all tell me that there's -- someone's unhappy about that.

01:42 22 MS. PROCTOR: So I do still have one final concern with
01:42 23 this one, before we get to the part about settlements, which we
01:42 24 can address in a moment. And that's just that it's a very long
01:42 25 instruction already, if we use theirs. And, especially, if you

01:42 1 now add a big chunk of ours --

01:42 2 THE COURT: You're going to have a hard time -- it's

01:42 3 47 pages -- convincing me that --

01:42 4 MS. PROCTOR: I hear you, Your Honor.

01:42 5 THE COURT: So here's what I'm going to do on 34. I'm

01:42 6 going to give Intel's proposal. What I want someone to do is

01:42 7 make sure with -- I act like I know what I'm talking about

01:42 8 here. When you say -- when one side says, I want this removed,

01:42 9 make sure Evan knows what it is you want removed and that

01:42 10 you've agreed to. I'm okay with that.

01:42 11 And then we'll take the sentence how -- beginning with,

01:43 12 "however," if you choose, that's in red, and we will put that

01:43 13 at the end of the blue language, and that will be this

01:43 14 instruction.

01:43 15 MR. TOMPROS: Thank you, Your Honor.

01:43 16 THE COURT: And so then we're turning to --

01:43 17 MS. PROCTOR: Can I just -- sorry -- clarify one little

01:43 18 thing? Are you -- for that last bit that they proposed on

01:43 19 litigation-related agreements, are you planning to include that

01:43 20 or not? Because, obviously we don't think that's appropriate,

01:43 21 and I can explain why.

01:43 22 THE COURT: Yeah. I'm sorry. I missed that. I mean, I

01:43 23 missed that when I read this.

01:43 24 I'm not going to -- again, I'm not going to include

01:43 25 anything that has to do with being influenced by a desire to

01:43 1 avoid the cost of further litigation.

01:43 2 MR. TOMPROS: May I be heard on that?

01:43 3 THE COURT: Yes, sir.

01:43 4 MR. TOMPROS: I would just say, Your Honor, this is an
01:43 5 instruction that we only proposed in the alternative, as you
01:43 6 can kind of see there, because our view was that licenses that
01:43 7 were the product of litigation should not be introduced at all.
01:44 8 As you heard during the examination this morning -- the
01:44 9 cross-examination this morning, Mr. Mueller objected precisely
01:44 10 to those, asked for and got a standing objection to those,
01:44 11 which Your Honor overruled.

01:44 12 Now there is evidence in the record of licenses that are
01:44 13 driven by litigation that have different numbers. The Court
01:44 14 in -- the Federal Circuit in the Prism case made very clear
01:44 15 that those are different and the litigation impact of those
01:44 16 must be considered.

01:44 17 And this instruction that we proposed is directly from the
01:44 18 Federal Circuit Bar Association model instruction B59. That's
01:44 19 where that paragraph comes from. If they hadn't been in the
01:44 20 case at all, of course there'd be no need for an instruction.
01:44 21 But having overruled that objection, we do think it's necessary
01:44 22 to instruct.

01:44 23 THE COURT: Yes, ma'am.

01:44 24 MS. PROCTOR: So the instruction they have in there is
01:44 25 very one-sided. And, of course, we have to take into account

01:44 1 the facts that are actually in the case. And so the facts that
01:45 2 actually came into evidence, Your Honor, are about settlement
01:45 3 agreements where the values are very high, 300 million,
01:45 4 1.5 billion. These are not agreements that are trying to avoid
01:45 5 the cost and burden of litigation, right? There's more to it
01:45 6 that -- than that.

01:45 7 And, in fact, we think Your Honor has prevented us from
01:45 8 talking about the fact that the low lump sum agreements Intel
01:45 9 is relying on are actually the ones that are being influenced
01:45 10 by litigation. But because we have not been able to make that
01:45 11 argument, we think that this one-sided jury instruction should
01:45 12 not be included.

01:45 13 THE COURT: Okay. Just give me one second.

01:46 14 See, so I don't even think this is necessarily accurate
01:46 15 because it might -- I think what I heard also is that you might
01:46 16 do this to avoid litigation at all. And so that -- that is my
01:46 17 problem here. But give me a second to think.

01:46 18 MR. TOMPROS: Happy to address that, Your Honor.

01:46 19 THE COURT: Yes, sir.

01:46 20 MR. TOMPROS: I would say that the instruction actually --
01:46 21 I -- it is -- it's the model language and it is trying to
01:46 22 encompass a series of different scenarios. But I do think it
01:46 23 is -- it does encompass the scenario that was addressed both by
01:47 24 Mr. Sullivan's cross-examination and, frankly, what we expect
01:47 25 VLSI will put on through Mr. Chandler, the last -- the last

01:47 1 witness, who addresses litigation settlement agreement.

01:47 2 The first point I would say, it specifically says "may
01:47 3 consider," right? So this is an additional factor about a
01:47 4 license that the jury may consider. And the second --

01:47 5 THE COURT: But -- yeah. But here's my problem is is this
01:47 6 is focusing the jury on one of the other things that might be
01:47 7 considered. And it seems to me that it does skew towards
01:47 8 Intel's benefit that this is the one that I singled out, is the
01:47 9 problem I'm having.

01:47 10 MR. TOMPROS: And, Your Honor, we agree that it is one of
01:47 11 several considerations. And I do think that the absence of it,
01:47 12 though, is -- skews the other direction, right? Not -- not
01:47 13 instructing the jury that when something is part of a
01:47 14 litigation, its value can be and should be adjusted because of
01:47 15 that. And I think that skews the other direction.

01:47 16 That was exactly the problem with that Prism case, the
01:47 17 Federal Circuit case from 2017.

01:47 18 So there's very clear law that the fact that a license was
01:48 19 the result of litigation affects it economically.

01:48 20 THE COURT: Here's what I'm going to do. I'm going to
01:48 21 give this sentence to the point where it says, "When
01:48 22 determining if a license agreement is comparable to" -- "the
01:48 23 hypothetical to" -- "the hypothetical license, you may consider
01:48 24 whether the license agreement is between" -- is -- I'm going to
01:48 25 say "is" or "was between parties who are involved in a

01:48 1 lawsuit."

01:48 2 I'm going to stop there, and I'm going to -- as I said
01:48 3 earlier, with the concern Mr. Chu raised that if there's
01:48 4 something in the record that I admitted that either side wants
01:48 5 to discuss related to these license agreements, you can do so.
01:48 6 If it's -- if I've admitted it in the record, I just don't want
01:48 7 you to -- I don't want either side to be able to point where --
01:49 8 where I say -- where you can say, look, the judge tells you
01:49 9 this.

01:49 10 I don't want there to be the weight of judicial imprimatur
01:49 11 on any one specific issue. But you all are free in your
01:49 12 closing to discuss anything related to this that has been
01:49 13 admitted into evidence. And so that will take care of that, I
01:49 14 hope.

01:49 15 And then the lump sum versus a running royalty. We need
01:49 16 to wrap this up pretty quickly, but let me start with
01:49 17 plaintiff's counsel.

01:49 18 MS. PROCTOR: Thank you, Your Honor. So we have a concern
01:49 19 with this that also relates to the verdict form, and they've
01:49 20 actually proposed a final question that says, are you awarding
01:49 21 a lump sum for past and future damages or just a running
01:49 22 royalty for past damages.

01:49 23 THE COURT: I've seen that.

01:49 24 MS. PROCTOR: So that's really our concern. We don't want
01:49 25 to instruct the jury on this because we think that verdict form

01:49 1 question is improper. It is -- as you heard on Friday night,
01:49 2 the parties have agreed that the financial data Intel produced
01:50 3 only goes through December 31st, 2019. We do not have
01:50 4 financial data beyond that and --

01:50 5 THE COURT: But I never heard Dr. Sullivan mention a
01:50 6 running royalty.

01:50 7 MS. PROCTOR: Oh, he absolutely -- his testimony was --
01:50 8 it's built on a foundation of a running royalty, right? He --

01:50 9 THE COURT: Well, it is, kind of.

01:50 10 MS. PROCTOR: He tied it over and over again -- and
01:50 11 that -- so sorry.

01:50 12 THE COURT: It is, kind of. I'm not really sure how to
01:50 13 accurately describe Dr. Sullivan's testimony. It certainly
01:50 14 seemed more like he came up with a lump sum to me than a
01:50 15 running royalty.

01:50 16 MS. PROCTOR: And, Your Honor, that's actually exactly
01:50 17 part of the problem here. Because what he did is it -- he said
01:50 18 he was calculating it based on the use Intel made but only for
01:50 19 certain dates, right? And so it is a running royalty, but he's
01:50 20 calculated it as a lump sum.

01:50 21 And so it's just extremely confusing to the jury. We give
01:50 22 them a line for a lump sum, and then we ask them whether it's a
01:50 23 lump sum or a running royalty. It's not understandable for the
01:51 24 jury.

01:51 25 And it also implicates our legal rights. We think these

01:51 1 are equitable questions about whether we get an ongoing
01:51 2 royalty, for example, postjudgment.

01:51 3 THE COURT: I understand what the problem is. But what
01:51 4 I'm saying is, what I heard Dr. Sullivan say was whatever --
01:51 5 however he said he got there, the way I heard -- I think you
01:51 6 accurately quoted it, which was "I'm giving a lump sum for the
01:51 7 damages that our guys have incurred because of past
01:51 8 infringement."

01:51 9 But that -- that's the language he used. That's the
01:51 10 reason we had the whole fight over royalty rate per unit.

01:51 11 And so I'm -- my fear is the opposite of yours. I get why
01:51 12 there may be a problem with what happens if you win, and if the
01:51 13 plaintiff comes in and says, you know, we ought to get more
01:51 14 money for -- going forward. I had one of these cases as a
01:51 15 plaintiff. I'm -- I get it.

01:52 16 But your -- the evidence in the case, the testimony from
01:52 17 your witness basically said, here's a lump sum amount.

01:52 18 MS. PROCTOR: For a certain period, Your Honor. So it
01:52 19 absolutely is a running royalty for that period.

01:52 20 THE COURT: Okay. Well, it is a running royalty for a
01:52 21 period that's given in a lump sum.

01:52 22 MS. PROCTOR: Yes. And that's part of the issue with the
01:52 23 instruction they want to give, because it will not be
01:52 24 understandable in light of that.

01:52 25 And that was in part to accommodate the verdict form as

01:52 1 well. We wanted to have a single number -- the parties had
01:52 2 already agreed on the portion of the verdict form that would
01:52 3 just be a line with a dollar amount.

01:52 4 And so we wanted to give the jury the number they needed
01:52 5 for that line. But of course it is based on a running royalty,
01:52 6 and Intel does not dispute that it only goes through those
01:52 7 financial data they provided through December 31st, 2019.

01:52 8 THE COURT: No. I --

01:52 9 MR. TOMPROS: I mean, respectfully, Your Honor, we don't
01:52 10 dispute that the financial data goes there. But I think as --
01:52 11 this is part of why this instruction makes a whole lot more
01:53 12 sense after you've seen our damages clarification.

01:53 13 As you heard today, our view is that the appropriate
01:53 14 reasonable royalty would be a comparable royalty for a fully
01:53 15 paid-up license, like was discussed today. And that is
01:53 16 precisely a lump sum.

01:53 17 It's been the position we've taken throughout the case,
01:53 18 and it's absolutely in the record as of today. And this idea
01:53 19 of a per-unit royalty was, you know, as you heard, what Mr. Lee
01:53 20 objected to before.

01:53 21 THE COURT: Well, that's not going to really be a problem
01:53 22 here, I don't think.

01:53 23 MR. TOMPROS: I agree.

01:53 24 THE COURT: Because I don't -- but the language we choose
01:53 25 here, given the way this was put on, is -- it is -- I want to

01:53 1 protect Intel, and so I definitely want to allow you all to
01:53 2 argue the -- based on what your expert said.

01:53 3 But the way the plaintiff's case was put on, I'm not sure
01:53 4 that the first line of your instruction, "a reasonable royalty
01:54 5 can be paid either in the form of a one-time lump sum payment
01:54 6 or as a running royalty," in that they did present it, the
01:54 7 running royalty, and again, what they did was they came up with
01:54 8 the lump sum amount that they thought was appropriate.

01:54 9 And I -- you know, I went back today, as your damages
01:54 10 expert was testifying, to make sure -- I thought I'd done the
01:54 11 right thing when you all -- and I'm sure -- if the plaintiff
01:54 12 wins, I'm sure three other people will decide whether I did or
01:54 13 not. But I went back and verified for my own comfort that
01:54 14 there is an economic -- an established economic methodology
01:54 15 that supports Dr. Sullivan.

01:54 16 Now, whether that -- whether it should come in in a patent
01:54 17 case or not, I guess we may find out. I am comfortable that
01:54 18 the methodology that he employed is something that is
01:55 19 recognized in economic theory. Whether or not it's appropriate
01:55 20 to use it for patent cases or not, you know, we're going to --
01:55 21 I guess we'll have to see.

01:55 22 And so -- which makes Daubert, as you know, very hard
01:55 23 because the plaintiff, I thought, did a very good job of taking
01:55 24 an established methodology -- recognized established
01:55 25 methodology and then buttressing it with the evidence from the

01:55 1 technical experts here to say, here's how I'm getting to that.

01:55 2 So I thought both the method and the methodology used
01:55 3 survived Daubert. But here, I guess I'm paying the price for
01:55 4 this by having to figure out how to phrase the charge to the
01:55 5 jury.

01:55 6 MR. TOMPROS: Your Honor, I would just add, obviously you
01:55 7 heard our arguments on Daubert on exactly this issue. And we
01:55 8 agree that this is a new and different version that the
01:56 9 plaintiff has put forward of a damages theory.

01:56 10 The theory that Intel has put forward, we think, is
01:56 11 actually pretty standard. And that's why this is a standard
01:56 12 instruction in the --

01:56 13 THE COURT: I personally have put on exactly the damage
01:56 14 case that you put on this morning other times. So I recognize
01:56 15 that one. I totally get that one. So give me one second here.

01:56 16 Okay. Here's what I'm going to do. I'm going to -- I'm
01:57 17 not going to give the first sentence of the Intel suggestion.
01:57 18 I'm going to take -- I'm going to skip over that paragraph for
01:58 19 a second.

01:58 20 I'm going to start off with "reasonable royalty awards."
01:58 21 I'm going to give the -- Intel's second paragraph will be the
01:58 22 first paragraph. Then it will say, "Reasonable royalty awards
01:58 23 may take the form of a running royalty." That will be the
01:58 24 second paragraph.

01:58 25 The third paragraph will be the one submitted by VLSI.

01:58 1 And then I'm going to take the two sentences from the first
01:58 2 paragraph, I'm going to insert them as a final paragraph in
01:58 3 this.

01:58 4 So the last paragraph will read, any -- "all of these
01:58 5 methods are designed to compensate the patent owner for any
01:59 6 infringement. It is up to you, based on the evidence, to
01:59 7 decide what type of royalty, if any, is appropriate in this
01:59 8 case."

01:59 9 And under this, the plaintiff will be able to argue what
01:59 10 Dr. Sullivan submitted and Intel can certainly argue based on
01:59 11 this what its expert submitted.

01:59 12 Do we have anything else we need to take up?

01:59 13 MR. TOMPROS: We would like to put our objections on the
01:59 14 record.

01:59 15 THE COURT: Of course. I'm sorry. Oh, we also need to
01:59 16 take up the verdict form as well.

01:59 17 MS. PROCTOR: Yes, Your Honor.

01:59 18 THE COURT: So give me one second. So I'm going to
01:59 19 start with the plaintiff's verdict form in terms of formatting.
01:59 20 Doesn't mean I -- and so -- so I've got plaintiff's form.

02:00 21 I'm -- let me just walk through this, and I'll ask counsel for
02:00 22 Intel to tell me, on Page 1 --

02:00 23 MR. TOMPROS: I may be able to shortcut it considerably,
02:00 24 Your Honor.

02:00 25 THE COURT: Yes, please.

02:00 1 MR. TOMPROS: I think we would be willing to agree with
02:00 2 plaintiff's form with the exception of the addition of the lump
02:00 3 sum checkbox that we described before. Again, with the caveat
02:00 4 that we are preserving our prior objections on willfulness and
02:00 5 equivalence.

02:00 6 THE COURT: Sure. No. Right now, all we're talking about
02:00 7 is formatting.

02:00 8 MR. TOMPROS: Yep.

02:00 9 THE COURT: And so I'm not -- let the record be clear, and
02:00 10 you'll get to do this formally in a few seconds where you
02:00 11 actually put on the record your objections. But for right now,
02:00 12 in terms of format, let's go on the record with -- tell me
02:00 13 again what Intel is unhappy with.

02:00 14 MR. TOMPROS: That -- specifically that at the end of the
02:00 15 plaintiff's form, there is not the question that we have
02:00 16 proposed, which is the one that Ms. Proctor was just discussing
02:01 17 with you, which is, is the total amount you found in this
02:01 18 question a one-time lump sum for past and future sales or a
02:01 19 royalty for past sales only? Check one, one-time lump sum or
02:01 20 reasonable royalty.

02:01 21 So our question for 1b, we would propose --

02:01 22 THE COURT: Let me throw this out. And again, when I ask
02:01 23 you this, I'm preserving Intel's objection to all of this.
02:01 24 We're talking formatting now because I want to preserve this.

02:01 25 Given that I have given an alternative that wasn't

02:01 1 followed by the -- Intel, what if on the verdict form it was --
02:01 2 the -- instead of just -- let me find it real quick. Sorry.

02:02 3 Oh, let me digress for just a second. On Intel's form, on
02:02 4 Page 6, I think Intel included, but the plaintiff did not, the
02:02 5 language that -- it comes right under the title "Damages,"
02:02 6 where it says, you know, you have to find something is
02:02 7 infringed and not invalid. I think that that ought to be
02:02 8 included.

02:02 9 Does the plaintiff have an objection to that?

02:02 10 MS. PROCTOR: We do object to that, Your Honor. We think
02:02 11 ours is clear based on the question flow.

02:02 12 THE COURT: Where do you have a -- where -- let me make
02:02 13 sure you understand what I'm saying.

02:02 14 MR. TOMPROS: Yeah. If I may, Your Honor. I think
02:02 15 Ms. Proctor and I may actually be saying the same thing. So
02:03 16 their Questions No. 6 and 7, in the body of the question, it
02:03 17 just says, answer it if you found yes to Question No. 1 --

02:03 18 MS. PROCTOR: Thank you. That is correct.

02:03 19 MR. TOMPROS: So that's why we didn't have a problem with
02:03 20 their version. But if Your Honor wants to --

02:03 21 THE COURT: No, no, no. I just wanted to make sure it was
02:03 22 in there. And so that's fine. Okay.

02:03 23 So turning to what hopefully is the final -- is the final
02:03 24 issue. Give me just one second here.

02:03 25 I wish I could look up to the clock on the wall and know

02:03 1 what time it is.

02:03 2 MS. PROCTOR: 2:03, Your Honor.

02:03 3 And we're happy to take -- obviously preserving our
02:03 4 objection to this question about the lump sum, we're happy to
02:03 5 take a shot at adding it to our form in a way that makes
02:04 6 logical sense.

02:04 7 THE COURT: No. I'm doing that right now.

02:04 8 MS. PROCTOR: We would ask, then, that Your Honor put in
02:04 9 parentheses next to one-time lump sum "for Intel," next to
02:04 10 royalty for past sales "for VLSI," as we've done for other
02:04 11 questions for clarity for the jury.

02:04 12 THE COURT: I'm not going to -- I'm coming up with another
02:04 13 option.

02:04 14 MS. PROCTOR: Oh, okay.

02:05 15 THE COURT: I'll start with the plaintiff.

02:06 16 Here's what I'm suggesting we ask, which I think is
02:06 17 consistent with the way you all are going to present your
02:06 18 arguments, is the total amount of damages you found in
02:06 19 Questions 6 and 7, one, a running royalty in the form of a lump
02:06 20 sum for past damages or, two, a lump sum for all damages?

02:06 21 MR. TOMPROS: No objection from Intel, Your Honor.

02:06 22 MS. PROCTOR: Can we just clarify, Your Honor, with a
02:06 23 parenthetical which one is for VLSI and which one is for Intel?

02:06 24 THE COURT: No.

02:06 25 MS. PROCTOR: Your Honor, we're just really concerned it's

02:06 1 going to create jury confusion. Because we really -- obviously
02:06 2 everyone's goal is to have a consistent verdict --

02:06 3 THE COURT: Let me -- I get that. But let me suggest that
02:06 4 during closing argument, you can certainly say to the jury that
02:07 5 you believe that the appropriate method to use is a reasonable
02:07 6 royalty in the form of a lump sum for past damages.

02:07 7 MS. PROCTOR: It's going to be a long night, Your Honor.
02:07 8 I don't know how much the jurors are going to remember, and I
02:07 9 think it's just cleaner to let them have that in front of them.

02:07 10 THE COURT: I'm going to allow you all to argue it however
02:07 11 you want to argue it. I'm not going to let them pick a format
02:07 12 because they want one side or the other to win.

02:07 13 And so they -- if -- they get to -- they get to decide
02:07 14 which format they think is appropriate. You all can make clear
02:07 15 in your closing arguments which you think is appropriate.

02:07 16 And so I'm not restricting VLSI in any way from saying,
02:07 17 "We believe that the correct answer in the judge's instruction
02:07 18 should be a reasonable royalty in the form of a lump sum for
02:07 19 past damages."

02:07 20 And if the jury can't figure out that -- which side wants
02:08 21 what, then we're lost anyway.

02:08 22 MS. PROCTOR: Okay. I understand, but I'll also just note
02:08 23 that we maintain our objection to the jury deciding future
02:08 24 damages at all.

02:08 25 THE COURT: They're not -- well, okay. I got that. But

02:08 1 there is -- but the way that -- here's the problem, is the
02:08 2 defendant has presented a model where they said the appropriate
02:08 3 amount is a lump sum that gives us the freedom to use this now
02:08 4 and forever. So that is a -- that is an answer that's
02:08 5 supported by the evidence.

02:08 6 MS. PROCTOR: And we think it's contrary to law, Your
02:08 7 Honor, for them to be able to extinguish our equitable rights
02:08 8 in the future.

02:08 9 THE COURT: Well, you have no equitable rights. You have
02:08 10 no equitable rights. You have -- in this case, you have rights
02:08 11 only to damages because you're not a practicing entity.

02:08 12 MS. PROCTOR: Well, we could certainly seek an injunction.
02:08 13 And if that were denied, we could --

02:08 14 THE COURT: How would you seek an injunction?

02:09 15 MS. PROCTOR: We could file the motion is what I mean,
02:09 16 Your Honor. And then there's an alternative of an ongoing
02:09 17 royalty that absolutely is available. It's an equitable remedy
02:09 18 to nonpracticing entities.

02:09 19 THE COURT: But they present -- I'm not going to argue too
02:09 20 much longer. They -- they will have presented to the jury
02:09 21 evidence that says the appropriate amount of the use is this,
02:09 22 and for that -- I've made clear on my record why I'm doing it.
02:09 23 So -- and that I'm doing it is either right or wrong. It
02:09 24 doesn't get better or worse because I add VLSI in one place and
02:09 25 Intel in the other.

02:09 1 I'm either -- if I'm wrong for allowing Dr. Sullivan to
02:09 2 have put on this -- this methodology, we'll find out in the
02:09 3 future.

02:09 4 If I'm wrong for having allowed Intel to say it's a lump
02:09 5 sum and it's this amount, we'll find out in the future. I'm
02:09 6 just going to -- I'm doing the best I can right now to -- to
02:09 7 give a jury charge that is faithful to what the evidence was in
02:09 8 the case.

02:10 9 MS. PROCTOR: Understood, Your Honor.

02:10 10 THE COURT: So assuming that I put in here -- what I'm
02:10 11 going to add to -- I'm going to add a question to the
02:10 12 plaintiff's -- everything else will be the same. Everything
02:10 13 will be the -- as the plaintiff gave it to me, with the
02:10 14 exception there will be a new Page 7, which will read, "Is the
02:10 15 total amount of damages you found in Questions 6 and 7, one, a
02:10 16 running royalty in the form of a lump sum for past damages
02:10 17 only; or, two, a lump sum for all damages?"

02:10 18 And I understand you're going to -- you're unhappy about
02:10 19 that. But let me -- I just need to have Evan --

02:10 20 Evan, can you add that?

02:10 21 LAW CLERK: Yes.

02:10 22 THE COURT: So why don't we go ahead now, and whoever's
02:10 23 going to make the objections to my charge on behalf of
02:10 24 plaintiff, please do so. Please do it as quickly as you can
02:11 25 just so we can bring the jury back in.

02:11 1 MS. PROCTOR: Thank you, Your Honor.

02:11 2 MR. HATTENBACH: Good afternoon, Your Honor.

02:11 3 THE COURT: No stall points here.

02:11 4 MR. HATTENBACH: No. I'm going to try to make this as
02:11 5 quick as possible. I don't know exactly what form you want it
02:11 6 in, so let me try this and make sure -- if it doesn't work for
02:11 7 you, I can do a more detailed version.

02:11 8 There are a number of jury instructions that we object to
02:11 9 as unduly prejudicial, misstating the law and the record, and
02:11 10 confusing. And those are the ones with --

02:11 11 THE COURT: You left out "respectfully" somewhere in
02:11 12 there.

02:11 13 (Laughter.)

02:11 14 MR. HATTENBACH: I --

02:11 15 THE COURT: You should say either "respectfully" or "with
02:11 16 all due respect."

02:11 17 MR. HATTENBACH: I -- I apologize. I did draw the short
02:11 18 straw. I have not been looking forward to this all week, as my
02:11 19 colleague said about reading the exhibits into the record. But
02:11 20 the ones that we object to on that basis are portions of
02:11 21 instructions 2, 3, 11, 13, 16, 17, 21, 22, 24, 25, 27 through
02:12 22 29, 30, 32 through 34, and 35.

02:12 23 We also object to the noninclusion of certain material
02:12 24 that we requested to be included in instructions 4, 15, 19, 20
02:12 25 and 35. And if you would like any more detail, I'd be glad --

02:12 1 THE COURT: As long as Intel -- and this is bilateral. As
02:12 2 long as -- we had your proposals. I think you've faithfully
02:12 3 articulated what your proposals were. But if someone's just
02:12 4 out there listening to what you said, they'd feel like I really
02:12 5 screwed this up. That was a lot of objecting. But --

02:12 6 MR. HATTENBACH: Right. But I'm referring to material
02:12 7 that we've discussed with Your Honor, I believe it was Thursday
02:12 8 night in a document that had red type and blue type,
02:12 9 signifying --

02:12 10 THE COURT: Oh, no. No. No. I -- I'm good with that.

02:12 11 MR. HATTENBACH: Okay.

02:12 12 THE COURT: I think the way you did it is fine. And we
02:12 13 went over each of the -- each of the pages that you submitted.
02:13 14 And I -- I -- I either refused to give those proposals, or I
02:13 15 gave -- or I gave proposals that you're unhappy with. That's
02:13 16 fine with me.

02:13 17 MR. HATTENBACH: That's all I have. Thank you, Your
02:13 18 Honor.

02:13 19 THE COURT: Thank you, sir.

02:13 20 And for Intel?

02:13 21 MR. TOMPROS: Thank you, Your Honor. On behalf of Intel,
02:13 22 we respectfully and very respectfully object --

02:13 23 (Laughter.)

02:13 24 MR. TOMPROS: -- under Rule 51(c) to the following
02:13 25 instructions: 2 through 4, 13 through 15, 17 through 24, 29

02:13 1 through 35 and the verdict form, on the basis that they are
02:13 2 contrary to law and consistent with the evidence in the case
02:13 3 and/or unduly prejudicial for the reasons we have previously
02:13 4 stated.

02:13 5 We'll also provide the Court with a chart of our specific
02:13 6 objections and alternatives prior to the charge.

02:13 7 Thank you, Your Honor.

02:13 8 THE COURT: Sounds to me like you are equally unhappy with
02:13 9 me which hopefully means I did a decent job.

02:14 10 So what we're going to do now is I'm going to take a short
02:14 11 break. Here, let me do this. I'm just trying to figure out
02:14 12 from you all's perspective. We're going to have a witness,
02:14 13 short witness. I always used to -- the judge I clerked for
02:14 14 always used to make a joke about, "Oh, is it a short witness?"
02:14 15 I haven't done that yet.

02:14 16 But -- and then I'll allow you all to tell me if you would
02:14 17 like to take a short break after I read the charge so that we
02:14 18 can roll through the entire closing. I'm happy to do that as
02:14 19 well.

02:14 20 But my suggestion is we bring the jury in. We finish with
02:14 21 the witness. I read the charge. And then we take a short
02:14 22 break. Unless -- but I'm -- if any of you want -- need a break
02:14 23 in some other way so that we can get through the closing
02:14 24 arguments without taking one, just let me know. So we'll stand
02:14 25 in recess for only about five minutes. But take whatever break

02:14 1 you need and we'll come back in.

02:15 2 THE BAILIFF: All rise.

02:15 3 (Recess taken from 2:15 to 2:23.)

02:23 4 THE BAILIFF: All rise.

02:23 5 THE COURT: Please remain standing for the jury.

02:23 6 (The jury entered the courtroom at 2:23.)

02:23 7 THE COURT: Thank you. You may be seated.

02:23 8 If you would give me one second.

02:23 9 Mr. Chu?

02:23 10 MR. CHU: Thank you very much, Your Honor.

02:23 11 Good afternoon, ladies and gentlemen. I have the pleasure
02:23 12 of introducing to you Charlotte Wen who's going to be
02:23 13 questioning the closing witness for our trial. I had the great
02:24 14 pleasure of meeting Ms. Wen when she was a summer intern at our
02:24 15 law firm.

02:24 16 MS. WEN: Good afternoon, everyone. My name is Charlotte
02:24 17 Wen.

02:24 18 DIRECT EXAMINATION

02:24 19 BY MS. WEN:

02:24 20 Q. And now that I've introduced myself, Mr. Chandler,
02:24 21 could you please introduce yourself to the jury?

02:24 22 A. Yes. Hi. My name is Mark Chandler. I'm managing
02:24 23 director of Upstream Partners. We're an intellectual property
02:24 24 consulting firm.

02:24 25 Q. And have you prepared any slides for your testimony

02:24 1 today?

02:24 2 A. Yes. I have.

02:24 3 Q. Can you tell the jury a little bit about your
02:24 4 educational background?

02:24 5 (Brief off-the-record discussion.)

02:24 6 (The witness was sworn.)

02:24 7 BY MS. WEN:

02:25 8 Q. So let's try that again. Could you please introduce
02:25 9 yourself to the jury?

02:25 10 A. Yes. My name is Mark Chandler. I'm managing
02:25 11 director of Upstream Partners. We're an intellectual property
02:25 12 consulting firm.

02:25 13 Q. Have you prepared slides for your testimony today?

02:25 14 A. Yes. I have.

02:25 15 Q. And could you tell the jury a bit about your
02:25 16 educational background?

02:25 17 A. Yes. I earned my bachelor's degree in electrical
02:25 18 engineering from Bucknell University. And I earned my MBA from
02:25 19 the Wharton School of the University of Pennsylvania.

02:25 20 Q. Do you have any other credentials?

02:25 21 A. Yes. I have the credential of a certified licensing
02:25 22 professional, and that is accredited by the Licensing Executive
02:25 23 Society.

02:25 24 I've also been recognized by my peers as one of the top IP
02:25 25 strategists -- top 300 IP strategists for intellectual asset

02:25 1 management for the -- in the first year they compiled that list
02:25 2 in 2010, all the way through last year, 2020. For every year.

02:25 3 Q. And how long have you worked in intellectual property
02:25 4 licensing and valuation?

02:26 5 A. I've been licensing patents and valuing intellectual
02:26 6 property for about 25 years now.

02:26 7 Q. Has any of that work involved the semiconductor
02:26 8 industry?

02:26 9 A. Yes. Much of that has been in semiconductors and
02:26 10 electronics.

02:26 11 Q. And have you ever personally negotiated a patent
02:26 12 license?

02:26 13 A. Yes. I license patents -- negotiate licenses on a
02:26 14 weekly basis. I've over my career negotiated well over 100
02:26 15 patent licenses and other agreements. Across a full range of
02:26 16 technologies. I've negotiated against large companies and
02:26 17 small companies, providing them licenses.

02:26 18 In addition, I've negotiated four large companies, small
02:26 19 companies, as well as universities, many of which you'll see
02:26 20 here on the screen.

02:26 21 Q. And how many licensing agreements have you analyzed
02:26 22 in your career?

02:26 23 A. Oh, well over 2,000 agreements.

02:26 24 MS. WEN: Your Honor, we offer Mark Chandler as an expert
02:26 25 in patent licensing, acquisition and valuation.

02:26 1 MR. MUELLER: No objection, Your Honor.

02:27 2 THE COURT: You'll be so approved.

02:27 3 BY MS. WEN:

02:27 4 Q. Mr. Chandler, are you being compensated for the
02:27 5 investigation that you performed in this case?

02:27 6 A. Yes. My firm is being compensated at my standard
02:27 7 hourly rate of \$540 an hour.

02:27 8 Q. And does that compensation depend at all on your
02:27 9 testimony, on your opinions or the outcome of this case?

02:27 10 A. No. Not at all.

02:27 11 Q. What is your role in this case?

02:27 12 A. I've been asked to review and analyze Intel's
02:27 13 arguments with regard to patent licenses and patent acquisition
02:27 14 agreements.

02:27 15 Q. Were you in the courtroom today for Mr. Huston's
02:27 16 testimony?

02:27 17 A. Yes. I was here.

02:27 18 Q. Do you agree with Mr. Huston's opinions?

02:27 19 A. No. I completely disagree.

02:27 20 MS. WEN: So turning to PDX-6.4.

02:27 21 BY MS. WEN:

02:27 22 Q. At a high level, could you please explain why you
02:27 23 disagree?

02:27 24 A. Yes. Well, in my opinion, Mr. Huston's analysis
02:27 25 is -- is deeply flawed. And that's primarily because he's

02:27 1 failed to take into account the most important aspect that one
02:27 2 needs to consider in a proper damages analysis. And that is
02:28 3 the actual value of VLSI patents that Intel has received in its
02:28 4 products.

02:28 5 In addition, you know, a second point, you heard
02:28 6 Mr. Huston talk about, you know, five aspects of real-world
02:28 7 evidence. Well, for each of those he's simply taken an amount
02:28 8 of a transaction and divided by the number of patents. And not
02:28 9 all patents are created equal. Each patent is its own unique
02:28 10 invention and has its own unique value.

02:28 11 In addition, in none of this real-world evidence that
02:28 12 Mr. Huston considered has taken into consideration the use of
02:28 13 VLSI patents in actual real-world Intel products or the
02:28 14 benefits that those patents have provided to those products or
02:28 15 the sales of those products to real-world Intel customers.
02:28 16 Dr. Sullivan has taken just an -- that kind of an approach.

02:28 17 Q. So why does the value of Intel's use of VLSI's
02:28 18 patents matter?

02:28 19 A. Well, because it's the law. As we've heard in this
02:29 20 trial, a patent gives the owner of the patent the right to
02:29 21 exclude others from making products or selling products based
02:29 22 upon their patent.

02:29 23 So the value of a patent is not necessarily confined to
02:29 24 the use of -- made by that patent by the patent owner, but it
02:29 25 must include -- it relates to value used by other parties.

02:29 1 And that's very clear in the statute that you need to
02:29 2 account for Intel's use of the VLSI patents.

02:29 3 Q. And do you recall Mr. Huston's testimony about
02:29 4 Freescale's acquisition of SigmaTel and Freescale's subsequent
02:29 5 merger with NXP?

02:29 6 A. Yes. I do recall that.

02:29 7 Q. How does Mr. Huston's testimony about those
02:29 8 transactions fail to account for Intel's use of VLSI's patents?

02:29 9 A. Well, those transactions were not about Intel. They
02:29 10 were not about Intel's use of the VLSI patents. They did not
02:30 11 take into account the value of the '373 patent or the '759
02:30 12 patent, and they certainly didn't account for any use of those
02:30 13 patents in Intel's products. So those transactions could not
02:30 14 have captured the value of those patents to Intel.

02:30 15 Q. And do you recall Mr. Huston's testimony about
02:30 16 various allegedly comparable agreements and offers?

02:30 17 A. Yes. I do.

02:30 18 Q. How does that testimony fail to account for the value
02:30 19 of Intel's use of VLSI's patents?

02:30 20 A. Well, these 20 agreements and supposed offers that
02:30 21 Mr. Huston referred to, for each of those agreements -- well,
02:30 22 first of all, these agreements did not include and were not
02:30 23 about the '373 patent or the '759 patent.

02:30 24 In addition, for those 20 agreements there's been no
02:30 25 evidence submitted by Mr. Huston or Intel in this matter that

02:30 1 they ever used the patents in those agreements in any actual
02:30 2 products by Intel.

02:30 3 And if you don't have any evidence of use in products, you
02:31 4 can't possibly know anything about the value that any products
02:31 5 are getting from those patents. So it can't be -- cannot be --
02:31 6 couldn't have anything to do to relate to the value of the VLSI
02:31 7 patents to Intel.

02:31 8 Q. Are there any other reasons that you disagree with
02:31 9 Mr. Huston?

02:31 10 A. Yes. Mr. Huston has selected 20 agreements that are
02:31 11 all for low lump sum payment amounts. But, in fact, he's
02:31 12 cherry-picked these agreements from well over 300 agreements
02:31 13 that have been produced by Intel in this matter, many of which
02:31 14 have been for amounts of hundreds of millions of dollars, even
02:31 15 billions of dollars.

02:31 16 Q. So taking a step back, what materials did you
02:31 17 consider in reaching your conclusions?

02:31 18 A. Well, I have a slide that shows them. I certainly
02:31 19 reviewed the patents, the sworn testimony, deposition of
02:31 20 various parties, correspondence and background information,
02:31 21 some legal documents. Before he had to leave for a medical
02:32 22 issue, I spoke with Mr. Stolarski. I spoke with Dr. Conte on a
02:32 23 number of matters.

02:32 24 In addition, I've read each of the 20 agreements that
02:32 25 Mr. Huston has handed-picked, as well as the more than 300 that

02:32 1 have been produced by the parties in this matter.

02:32 2 Q. Now, we've heard a lot about so-called real-world
02:32 3 licenses and offers from Mr. Huston. Are there ways in which a
02:32 4 hypothetical negotiation differs from a negotiation in the real
02:32 5 world?

02:32 6 A. Yes. There's many ways. You may have heard last
02:32 7 week that one of the foundational rules of the hypothetical
02:32 8 negotiation is both parties would acknowledge that the patents
02:32 9 are both valid and being infringed.

02:32 10 In a real-world negotiation, this is often disputed. You
02:32 11 know, a party seeking a license will rarely admit that a patent
02:32 12 is valid and also rarely never admit that they are seeking a
02:32 13 license.

02:32 14 In fact, we've heard in this case that Intel doesn't
02:32 15 even -- didn't even look into whether it used the patents of
02:32 16 those 20 agreements that the -- Mr. Huston referred to.

02:33 17 Secondly, both parties are assumed to be -- they
02:33 18 understand the need to reach an agreement. So you have a
02:33 19 willing licensee and you have a willing licensor.

02:33 20 In the real world, a company such as Intel can just simply
02:33 21 refuse to reach an agreement, and then the patent owner is
02:33 22 forced to take them to court to pursue a license.

02:33 23 MR. MUELLER: Your Honor, I object. It's the issue
02:33 24 discussed this morning.

02:33 25 THE COURT: Overruled.

02:33 1 BY MS. WEN:

02:33 2 Q. Are there any other differences between a
02:33 3 hypothetical negotiation and a real-world negotiation?

02:33 4 A. Yes. As we heard Dr. Sullivan mention last week,
02:33 5 both parties would have complete access to the other parties'
02:33 6 information.

02:33 7 So from a patent owner's perspective, they would have the
02:33 8 full information on Intel's, you know, use of their patents,
02:33 9 the benefits provided to the products and then the sales and
02:33 10 profits being generated. So they'd be in a position to make a
02:34 11 fully informed decision that reflects the actual value of
02:34 12 the -- being made by the licensee of their patents.

02:34 13 Q. And how would having full access to information be
02:34 14 helpful in a negotiation?

02:34 15 A. Well, it'd make all the difference in the world. You
02:34 16 know, the hypothetical negotiation can be thought of as a card
02:34 17 game which all the cards are face up on the table. So both
02:34 18 sides would know where the other one stands.

02:34 19 MS. WEN: So, Mr. Simmons, if you could please pull up
02:34 20 PDX-6.4.

02:34 21 BY MS. WEN:

02:34 22 Q. So I am referring to now to the categories of
02:34 23 information that Mr. Huston talked about in Categories 3
02:34 24 through 5. Do you recall when Mr. Huston discussed those, that
02:34 25 evidence?

02:34 1 A. Yes. I do.

02:34 2 Q. And so turning to these allegedly comparable
02:34 3 agreements and offers, as an initial matter, did any of these
02:35 4 agreements and offers in Categories 3 through 5 involve the
02:35 5 VLSI patents that are asserted at this trial?

02:35 6 A. No. None of them involved the patents.

02:35 7 Q. And you mentioned earlier that one major reason that
02:35 8 you don't agree with Mr. Huston is because he doesn't account
02:35 9 for the value of VLSI's patents to Intel. Do you remember
02:35 10 that?

02:35 11 A. Yes. I do.

02:35 12 Q. Is it possible to analyze whether an agreement is
02:35 13 economically comparable to the hypothetical license if you
02:35 14 don't know whether the patents are being used in Intel's
02:35 15 products?

02:35 16 A. No. Mr. Huston could not have conducted any sort of
02:35 17 economic analysis on the licenses that he says are comparable
02:35 18 because Intel hasn't identified any products that actually use
02:35 19 those patents. So he could not have conducted that.

02:35 20 And if you don't have evidence of use of a patent in a
02:35 21 product, then you don't have any evidence of the benefits and
02:35 22 you certainly don't have any understanding of the value of
02:35 23 those patents to Intel.

02:35 24 MS. WEN: And, Mr. Simmons, could we please have PDX-6.14?

02:36 25 BY MS. WEN:

02:36 1 Q. And is this a problem -- the problem that you've been
02:36 2 describing, is that a problem with every single one of the
02:36 3 agreements that Mr. Huston has identified?

02:36 4 A. Yes. Every single one.

02:36 5 MS. WEN: At this point, Your Honor, I think we'd like to
02:36 6 go on the confidential record for Intel confidential
02:36 7 information.

02:36 8 THE COURT: Okay. If anyone is in the courtroom who is
02:36 9 not under the protective order, you'll need to step out for a
02:36 10 few seconds.

02:36 11 MS. WEN: All right.

02:36 12 THE COURT: We'll also go off the public audio record.

02:36 13 MS. WEN: Thank you.

02:36 14 (Sealed proceedings.)

02:36 15 MS. WEN: At this point, we can go back on the public
02:42 16 record, I believe.

02:42 17 THE COURT: Okay.

02:42 18 BY MS. WEN:

02:42 19 Q. And so what is missing from Mr. Huston's analysis of
02:42 20 the agreements and offers that he's identified?

02:42 21 A. Well, he's identified, you know, a number of
02:42 22 transactions, acquisitions and some agreements.

02:42 23 With regard to the acquisitions, you know, these
02:42 24 acquisitions, these transactions, had nothing to do with Intel.
02:42 25 And these transactions did not take into consideration anything

02:42 1 about the '373 or the '759 patent or their use and value
02:43 2 provided to Intel.

02:43 3 And with regard to the so-called offers and the agreements
02:43 4 that Mr. Huston has selected, these didn't involve the VLSI
02:43 5 patents at all. As I mentioned, Intel has not submitted any
02:43 6 evidence that it ever used the patents that were transacted in
02:43 7 these agreements in real-world products.

02:43 8 And finally, you know, certainly these had nothing to do
02:43 9 with the value that Intel has received from its using the '373
02:43 10 and the '759 patents in their products.

02:43 11 Q. So in your opinion, are any of Mr. Huston's
02:43 12 agreements or offers comparable to the licenses that would have
02:43 13 resulted from the hypothetical negotiation here?

02:43 14 A. No. None of them are.

02:43 15 Q. And can you please summarize what the problems are
02:43 16 with Mr. Huston's analysis?

02:43 17 A. The problem with Mr. Huston is he's taken an indirect
02:43 18 approach to try to infer or -- or guess the value of the VLSI
02:44 19 patents to Intel. And he's done so by referring to agreements
02:44 20 that really have nothing to do with the patents and nothing to
02:44 21 do with the value of those patents to Intel.

02:44 22 In contrast to that was Dr. Sullivan's direct approach
02:44 23 where he has directly analyzed the -- the usage of the patents
02:44 24 in real-world Intel products. He's directly determined the
02:44 25 value of those -- of those patents in their products, as

02:44 1 required by the statute.

02:44 2 You know, so Dr. Sullivan has directly looked at the use
02:44 3 of the patented technology in Intel products. He's determined
02:44 4 the benefits of that patented technology as provided -- as
02:44 5 provided to the products. And he's determined the profits and
02:44 6 sales that Intel has earned from those products.

02:44 7 And Dr. Sullivan's, you know, indirect approach cannot
02:44 8 reference the value of the VLSI patents as being used by Intel.
02:44 9 Dr. Sullivan has conducted that exact analysis.

02:45 10 Q. So did you mean Dr. Huston's -- Mr. Huston's indirect
02:45 11 approach?

02:45 12 A. I'm sorry. Mr. Huston's indirect approach cannot
02:45 13 properly refer to the value of VLSI. Thank you.

02:45 14 MS. WEN: Thank you, Mr. Chandler.

02:45 15 I pass the witness.

02:45 16 THE COURT: Mr. Mueller?

02:45 17 MR. MUELLER: Yes, sir.

02:45 18 CROSS-EXAMINATION

02:45 19 BY MR. MUELLER:

02:45 20 Q. Good afternoon, sir. My name is Joe Mueller. May I
02:45 21 ask you a few questions?

02:45 22 A. Yes.

02:45 23 Q. Now, sir, you referred a few times in your testimony
02:45 24 just now to what you called Intel's use of the patents. Do you
02:45 25 recall that, sir?

02:45 1 A. Yes. I do.

02:45 2 Q. Now, you have a degree in electrical engineering,
02:45 3 correct?

02:45 4 A. Yes. I do.

02:45 5 Q. And I think you showed the jury that you had some
02:46 6 experience at a John Hopkins laboratory. There was some work
02:46 7 you did on applied physics; is that right?

02:46 8 A. Johns Hopkins University. Yes.

02:46 9 Q. Johns Hopkins. I apologize. But you did some --

02:46 10 A. Happens all the time. Yes, I did. I've worked in
02:46 11 atomic clocks.

02:46 12 Q. You have some technical training, fair to say?

02:46 13 A. Yes. That is true.

02:46 14 Q. And, sir, you've offered no opinion whatsoever that
02:46 15 Intel actually infringes the two patents in this case, correct?

02:46 16 A. That's correct. That was not my assignment.

02:46 17 Q. And so when you say use of the patents, let's be
02:46 18 clear. You don't have an opinion yourself on whether they're
02:46 19 actually using the patents, correct?

02:46 20 A. I've relied upon others' opinions. Yes.

02:46 21 Q. Now, you've referred a lot to Intel's use of the
02:46 22 patents. I noticed you didn't say much about the owner's use
02:46 23 of the patents, did you?

02:46 24 A. No. I did not.

02:46 25 Q. Because, in fact, they haven't used them, correct?

02:46 1 A. I have no way of knowing one way or the other.

02:46 2 Q. You have no opinion on that issue either, right?

02:46 3 A. I -- I have no way of knowing.

02:46 4 Q. You characterized the patents just now as the
02:46 5 equivalent of an oil well underneath the motel, right?

02:47 6 A. I made that comparison, yes.

02:47 7 Q. In that analogy, the evidence in this case has shown
02:47 8 the owners have never tapped into that well themselves. They
02:47 9 have oil and have chosen not to use it, according to your
02:47 10 analogy, correct?

02:47 11 A. Perhaps.

02:47 12 Q. Now, you've been retained by VLSI, right?

02:47 13 A. I've been retained by counsel for VLSI.

02:47 14 Q. Paid hundreds of thousands of dollars, correct?

02:47 15 A. Low hundreds. Yes.

02:47 16 Q. Low hundred -- low hundreds, but hundreds of
02:47 17 thousands of dollars, right?

02:47 18 A. Yes. That's correct. My firm has been paid. Let's
02:47 19 make that clear.

02:47 20 Q. You've worked with these lawyers in ten other cases,
02:47 21 haven't you?

02:47 22 A. Ten or less, perhaps.

02:47 23 Q. Now, in this case, you showed the ladies and
02:47 24 gentlemen of the jury several agreements that Intel entered
02:47 25 into.

02:47 1 MR. MUELLER: And, Your Honor, if I could briefly go in
02:47 2 the sealed record?

02:47 3 THE COURT: Yes, sir.

02:47 4 (Sealed proceedings.)

02:47 5 MR. MUELLER: We can take this off, Your Honor, and go off
02:49 6 the sealed record.

02:49 7 THE COURT: Okay.

02:49 8 BY MR. MUELLER:

02:49 9 Q. Now, Mr. Chandler, you have reviewed for your work on
02:49 10 this case over 350 agreements, correct?

02:49 11 A. Yes. That is correct.

02:49 12 Q. And those include the agreements we just saw and
02:49 13 several hundred other agreements that Intel entered into over a
02:49 14 very long period of time, right?

02:49 15 A. Yeah. That is correct. Yes.

02:49 16 Q. The vast majority of which had nothing to do with
02:49 17 litigation. They were voluntary license agreements, right?

02:49 18 A. I don't know if it's the vast majority or not.

02:49 19 Q. Okay. Now, you know, because you're a licensing
02:49 20 expert that in this hypothetical negotiation, it's not a
02:49 21 hypothetical negotiation to resolve a litigation. It's a
02:49 22 hypothetical negotiation for a license, right?

02:49 23 A. Yes.

02:49 24 Q. And you understand, because you've done cases like
02:49 25 this before, that one thing the jury can consider in analyzing

02:49 1 a hypothetical negotiation is something called comparable
02:50 2 agreements. You know what that term means, right?

02:50 3 A. I do. If they are comparable, indeed.

02:50 4 Q. And a comparable agreement is a particular agreement
02:50 5 that an expert has said is technologically and economically
02:50 6 comparable to what would have been the subject of this
02:50 7 hypothetical negotiation, right?

02:50 8 A. There are other aspects that need to be considered as
02:50 9 well. But those are -- those are two of them. Correct.

02:50 10 Q. Now, Mr. Huston took the stand just this morning,
02:50 11 correct?

02:50 12 A. Yes.

02:50 13 Q. And you're not here to question his credentials, are
02:50 14 you?

02:50 15 A. I'm not -- I -- I'm not sure if I can answer that yes
02:50 16 or no.

02:50 17 Q. Sure. Let me put it another way. You understand
02:50 18 that he's a trained engineer, correct?

02:50 19 A. Yes. I do.

02:50 20 Q. Has a master's degree in engineering, right?

02:50 21 A. Yes.

02:50 22 Q. Had 22 years of experience licensing negotiations at
02:50 23 IBM, correct?

02:50 24 A. That's what I understand, yes.

02:50 25 Q. He negotiated hundreds of agreements as a lead

02:50 1 negotiator, right?

02:50 2 A. I believe so. Yes.

02:50 3 Q. So you're not here to say he's unqualified to offer
02:50 4 the opinions he offered, are you?

02:50 5 A. That's correct.

02:51 6 Q. Now, he went through a lot of agreements himself, and
02:51 7 he identified 18 comparable license agreements, correct?
02:51 8 That's what he said are comparable?

02:51 9 A. That's correct.

02:51 10 Q. He also identified some prior sales agreements for
02:51 11 the patents-in-suit, right?

02:51 12 A. Prior -- I'm not sure if that was multiple. There
02:51 13 were prior transactions for companies.

02:51 14 Q. There were three, correct? Three transactions that
02:51 15 cover the patents-in-suit, among other things?

02:51 16 A. Cover -- but you said they were trans- -- I'm sorry.
02:51 17 You asked me were they transactions for the patents-in-suit?

02:51 18 Q. They were part of deals?

02:51 19 A. There's a distinction there. They -- the first two
02:51 20 were not -- the company acquisitions were clearly not
02:51 21 transactions for --

02:51 22 Q. Excuse me.

02:51 23 A. I'm -- I'm just clarifying. Sorry.

02:51 24 Q. You can finish your answer.

02:51 25 A. You asked me if they were for transactions in suit.

02:51 1 I said basically no.

02:51 2 Q. There were three transactions that included the
02:51 3 patents-in-suit, among other things too, correct?

02:51 4 A. That would be a correct statement.

02:52 5 Q. Now, Mr. Huston identified from this big body of
02:52 6 evidence things that he thought were comparable, correct?

02:52 7 A. Yes.

02:52 8 Q. You looked at 350 agreements, including the
02:52 9 agreements you showed the jury and many others, right?

02:52 10 A. That's correct.

02:52 11 Q. And, sir, out of all of those, you didn't identify a
02:52 12 single agreement that you viewed as comparable, did you?

02:52 13 A. No. I did not.

02:52 14 Q. And, in fact, those settlement agreements you just
02:52 15 showed the jury, you didn't even find those to be comparable,
02:52 16 did you?

02:52 17 A. Informative but not comparable. Correct.

02:52 18 Q. Sir, informative but not comparable, correct?

02:52 19 A. Correct.

02:52 20 Q. Now, Mr. Huston went further. He actually provided
02:52 21 the jury with a number that he said would have been the result
02:52 22 of this hypothetical negotiation, correct?

02:52 23 A. That is correct.

02:52 24 Q. You yourself, sir, in other cases, have performed
02:52 25 that same function. You've analyzed a hypothetical negotiation

02:53 1 and come up with a number that you thought would have been the
02:53 2 result, right?

02:53 3 A. In other cases, yes, that has been my role. Not in
02:53 4 this case.

02:53 5 Q. In this case you've been paid hundreds of thousands
02:53 6 of dollars, but you didn't come up with a number, did you?

02:53 7 A. That was not my assignment.

02:53 8 Q. Sir, whether it was your assignment or not, you did
02:53 9 not come up with a number, did you?

02:53 10 A. That is correct. Dr. Sullivan did.

02:53 11 Q. Now, you have watched the trial testimony in this
02:53 12 case; is that fair?

02:53 13 A. Much of it. Yes.

02:53 14 Q. And you know the one and only one witness who's taken
02:53 15 the stand and said that Intel is actually using these patents
02:53 16 is Dr. Conte who testified this morning, right?

02:53 17 A. That is correct.

02:53 18 Q. And as you saw this morning, he disagrees with
02:53 19 Intel's engineers on certain technical issues, right?

02:53 20 A. I didn't see all his testimony this morning.

02:53 21 Q. Let's put it this way. If the ladies and gentlemen
02:53 22 of the jury decide that Intel's engineers are right, Dr. Conte
02:53 23 is wrong and there's no infringement, what would be the
02:54 24 appropriate reasonable royalty?

02:54 25 A. Under those conditions, it would be zero.

02:54 1 Q. Thank you, sir.

02:54 2 MR. MUELLER: I have no further questions.

02:54 3 THE COURT: Redirect?

02:54 4 REDIRECT EXAMINATION

02:54 5 BY MS. WEN:

02:54 6 Q. Just a few questions.

02:54 7 A. Uh-huh.

02:54 8 Q. Mr. Chandler, do you recall when Intel's counsel
02:54 9 asked you about the prior work you've done with my firm?

02:54 10 A. Yes. I do.

02:54 11 Q. When you provide expert testimony, are you trying to
02:54 12 provide testimony to help the party you're working with or
02:54 13 provide your neutral opinions?

02:54 14 A. When I'm hired, I'm asked to conduct an analysis to
02:54 15 take in the facts, to discern that and form my own independent
02:54 16 opinions. And I've done this work for plaintiffs and
02:55 17 defendants.

02:55 18 Q. And does it matter what law firm you're working with?

02:55 19 A. No. It doesn't matter at all.

02:55 20 Q. And recall when you were asked about the settlement
02:55 21 agreements that you talked to the jury about?

02:55 22 A. Yes. I do.

02:55 23 Q. Why did you talk about the settlement agreements?

02:55 24 A. Well, as I mentioned, in my view, the parties to the
02:55 25 hypothetical negotiation would have found those agreements to

02:55 1 be informative, informative of licensing behavior, past history
02:55 2 of one of the two parties that's at the table at the
02:55 3 negotiation.

02:55 4 And as I mentioned, these were seven agreements when cases
02:55 5 have proceeded into litigation, where they've settled for
02:55 6 hundreds of millions, if not billions of dollars.

02:55 7 MS. WEN: And can we go briefly on the confidential record
02:55 8 to discuss one of the agreements?

02:55 9 THE COURT: Yes.

02:55 10 (Sealed proceedings.)

02:58 11 MS. WEN: Thank you, Mr. Chandler.

02:58 12 MS. WEN: I pass the witness.

02:58 13 THE COURT: Mr. Mueller?

02:58 14 MR. MUELLER: We can go back on the public record, Your
02:58 15 Honor.

02:58 16 RECROSS-EXAMINATION

02:58 17 BY MR. MUELLER:

02:58 18 Q. Just a couple final questions, Mr. Chandler.

02:58 19 Again, you studied over 300 agreements for your work on
02:58 20 this case, correct?

02:58 21 A. That is correct.

02:59 22 Q. You concluded that not a single one was comparable,
02:59 23 right?

02:59 24 A. Yes. As I just mentioned.

02:59 25 Q. You were not able to find a single comparable

02:59 1 agreement to the damages demand that VLSI is making of billions
02:59 2 for two patents, correct?

02:59 3 A. Not through comparable agreement analysis.

02:59 4 Q. You had no comparable, did you?

02:59 5 A. That is correct.

02:59 6 MR. MUELLER: No further questions.

02:59 7 THE COURT: You may step down.

02:59 8 Does the plaintiff have any other witness?

02:59 9 MR. CHU: VLSI rests its case.

02:59 10 THE COURT: Mr. Lee?

02:59 11 MR. LEE: Two things, Your Honor. One is we would renew
02:59 12 our motions again as we're obligated to do, and Intel rests.

02:59 13 THE COURT: Ladies and gentlemen, if you'll give me just
02:59 14 two minutes to step back with my clerk and make sure we're
02:59 15 ready to go, I think I'll come back in and be able to read you
03:00 16 the jury charge, which is only 44 pages long.

03:00 17 So I'm going to go back and just make sure we are ready to
03:00 18 go. I'll come out. I'll read it to you. When I finish
03:00 19 reading it to you, we'll take a short break and then we'll have
03:00 20 the closing arguments. If you all just will hold fast for a
03:00 21 one or two minutes.

03:00 22 THE BAILIFF: All rise.

03:00 23 (Recess taken from 3:00 to 3:01.)

03:02 24 THE COURT: Thank you. You may be seated.

03:02 25 Yes, sir.

03:02 1 MR. CHU: We just wanted to renew our motions.

03:02 2 THE COURT: Okay.

03:02 3 MR. CHU: Thank you.

03:02 4 THE COURT: Thank you, sir. And for the record, they're
03:02 5 denied.

03:02 6 Okay. Ladies and gentlemen of the jury -- let me ask one
03:02 7 question of the lawyers. Typically I don't read the verdict
03:02 8 form. But if either counsel cares for me to do that, I'll do
03:02 9 that. Just let me know.

03:02 10 MR. CHU: It's fine with us if you do not read the verdict
03:02 11 form.

03:02 12 MR. LEE: It's fine with us. They'll have a hard copy.

03:02 13 THE COURT: Yes, sir.

03:03 14 Are you all ready?

03:03 15 Very good. Members of the jury, it is my duty and
03:03 16 responsibility to instruct you on the law you are to apply in
03:03 17 this case. The law contained in these instructions is the only
03:03 18 law that you may follow. It is your duty to follow what I
03:03 19 instruct you the law is regardless of any opinion that you
03:03 20 might have as to what the law ought to be.

03:03 21 Each of you is going to have your own printed copy of the
03:03 22 final jury instructions that I'm giving you so there is really
03:03 23 no need for you to take notes unless you want to.

03:03 24 If I have given you the impression during the trial that I
03:03 25 favor either party, you must disregard that impression. If I

03:03 1 have given you the impression during the trial that I have an
03:03 2 opinion about the facts of this case, you must disregard that
03:03 3 impression.

03:03 4 You are the sole judges of the facts of this case. Other
03:03 5 than my instructions to you on the law, you should disregard
03:03 6 anything I may have said or done during the trial in arriving
03:03 7 at your verdict. You should consider all of the instructions
03:04 8 about the law as a whole and regard each instruction in light
03:04 9 of the others without isolating a particular statement or
03:04 10 paragraph.

03:04 11 The testimony of the witnesses and other exhibits
03:04 12 introduced by the parties constitutes the evidence. The
03:04 13 statements of counsel are not evidence. They are only
03:04 14 arguments.

03:04 15 It is important for you to distinguish between the
03:04 16 arguments of counsel and the evidence on which those arguments
03:04 17 rest. What the lawyers say or do is not evidence. You may,
03:04 18 however, consider their arguments in light of the evidence that
03:04 19 has been admitted and determine whether the evidence admitted
03:04 20 in this trial supports the arguments.

03:04 21 You must determine the facts from all of the testimony
03:04 22 that you have heard and the other evidence submitted. You are
03:04 23 the judges of the facts, but in finding those facts, you must
03:04 24 apply this law as I instruct you.

03:04 25 You are required by law to decide this case in a fair,

03:04 1 impartial and unbiased manner based entirely on the law and on
03:05 2 the evidence presented to you in the courtroom. You may not be
03:05 3 influenced by passion, prejudice or sympathy that you might
03:05 4 have for VLSI or Intel in arriving at your verdict.

03:05 5 After the remainder of these instructions, you will hear
03:05 6 closing arguments from the attorneys. Statements and arguments
03:05 7 of the attorneys, I remind you, are not evidence. They are not
03:05 8 instructions on the law. They are intended only to assist the
03:05 9 jury in understanding the evidence and the parties'
03:05 10 contentions.

03:05 11 A verdict form has been prepared for you. You are to take
03:05 12 this verdict form with you to the jury room. And when you have
03:05 13 reached a unanimous decision or agreement as to the verdict,
03:05 14 you are to have your foreperson fill in the blanks in the
03:05 15 verdict form, date it and sign it.

03:05 16 Answer each question in the verdict form from the facts as
03:05 17 you find them to be. Do not decide who you think should win
03:05 18 the case and then answer the questions to reach that result.
03:05 19 Again, your answers and your verdict must be unanimous.

03:05 20 I will now summarize the issues that you must decide and
03:05 21 for which I will provide instructions to guide your
03:06 22 deliberations. You must decide the following four main issues:
03:06 23 Whether VLSI has proven by a preponderance of the evidence that
03:06 24 any of the following claims are infringed by Intel: Claims 1,
03:06 25 5, 6, 9 and 11 of the '373 patent by the Haswell client and

03:06 1 Broadwell client products by literal infringement, and
03:06 2 Claims 14, 17, 18 and 24 of the '759 patent by the Skylake
03:06 3 client and server, Kaby Lake client, Coffee Lake client,
03:06 4 Whiskey Lake client, Amber Lake client, Cannon Lake client, Ice
03:06 5 Lake client and server, Cascade Lake server and Tiger Lake
03:06 6 client, products that include Speed Shift technology by literal
03:06 7 infringement or under the Doctrine of Equivalents.

03:06 8 Patent infringement is determined on a claim-by-claim
03:06 9 basis. You may find that one claim of a patent is infringed
03:06 10 while other claims of the same patent are not infringed.

03:06 11 No. 2, whether VLSI has proven by a preponderance of the
03:06 12 evidence that Intel's infringement of any of the claims was
03:07 13 willful.

03:07 14 3, whether Intel has proven by clear and convincing
03:07 15 evidence that any of the following claims are invalid:
03:07 16 Claims 14, 17, 18 and 24 of the '759 patent.

03:07 17 Patent invalidity is determined on a claim-by-claim basis.
03:07 18 You may find that one claim of a patent is invalid while other
03:07 19 claims of the same patent are not invalid.

03:07 20 4, if any claims of any patents are infringed and not
03:07 21 invalid, what amount of damages, if any, VLSI has proven by a
03:07 22 preponderance of the evidence for infringement of those claims.

03:07 23 3, evidence. The evidence you are to consider consists of
03:07 24 the testimony of the witnesses, the documents and exhibits that
03:07 25 I admitted into evidence and any facts the lawyers agreed or

03:07 1 stipulated to. You are to apply any fair inferences and
03:07 2 reasonable conclusions you draw from the facts and
03:07 3 circumstances that you believe have been proven. Nothing else
03:07 4 is evidence.

03:07 5 As a reminder, here are some evidence of what is not
03:08 6 evidence: The fact that VLSI filed a lawsuit is not evidence
03:08 7 that is entitled to a judgment. The act of making a claim in a
03:08 8 lawsuit by itself does not in any way tend to establish that
03:08 9 claim -- that claim and is not in evidence -- and is not
03:08 10 evidence.

03:08 11 Likewise, the fact that Intel has raised arguments against
03:08 12 the claim or claims asserted is not evidence that Intel is
03:08 13 entitled to a judgment. The act of making defensive arguments
03:08 14 by itself does not in any way tend to establish that such
03:08 15 arguments have merit and is not evidence.

03:08 16 The statements, arguments and questions by the attorneys
03:08 17 are not evidence. Objections to questions are not evidence.
03:08 18 The attorneys that are seated in front of you may object if
03:08 19 they believe that documents or testimony that is attempted to
03:08 20 be offered into evidence are improper under the rules of
03:08 21 evidence.

03:08 22 During the trial I may not have let you hear the answers
03:08 23 to some of the questions the lawyers asked. I may have ruled
03:08 24 that you cannot see some of the exhibits that the lawyers
03:08 25 wanted you to see. Further, sometimes I may have ordered you

03:08 1 to disregard things that you saw or heard, or struck things
03:09 2 from the record.

03:09 3 You must follow my rulings and completely ignore all of
03:09 4 these things. Do not speculate about what a witness might have
03:09 5 said or what an exhibit might have shown. These things are not
03:09 6 evidence and you are bound by your oath not to let them
03:09 7 influence your decision in any way.

03:09 8 Generally speaking, there are two types of evidence. One
03:09 9 is direct evidence, such as testimony of eye witnesses.

03:09 10 The other is indirect or circumstantial evidence.
03:09 11 Circumstantial evidence is evidence that proves a fact from
03:09 12 which you can logically conclude another fact exists.

03:09 13 As a general rule, the law makes no distinction between
03:09 14 direct and circumstantial evidence. It simply requires that
03:09 15 you determine the facts from all of the evidence that you hear
03:09 16 in this case, whether direct, circumstantial or any
03:09 17 combination.

03:09 18 As I instructed you before the trial began, in judging the
03:09 19 facts you must consider all the evidence, both direct and
03:09 20 circumstantial. That does not mean you have to believe all of
03:09 21 the evidence. It is entirely up to you to give the evidence
03:09 22 you receive in this case whatever weight you individually
03:09 23 believe it deserves. It'll be up to you to decide which
03:10 24 witnesses to believe, which witnesses not to believe, the
03:10 25 weight you give any testimony you hear and how much of any

03:10 1 witness' testimony you choose to accept or reject.

03:10 2 You should never be influenced by any ruling on any
03:10 3 objection. If I sustained an objection, then just pretend the
03:10 4 question was never asked. If there was an answer given, ignore
03:10 5 it. If I overruled the objection, act like the objection was
03:10 6 never made. If I gave you an instruction that some item of
03:10 7 evidence was received only for a limited purpose, you must
03:10 8 follow that instruction.

03:10 9 If I gave any limiting instruction during the trial, you
03:10 10 must follow it. Any testimony I tell you to exclude or
03:10 11 disregard is not evidence and it may not be considered.

03:10 12 You must not conduct any independent research or
03:10 13 investigation. You must make your decision based only on the
03:10 14 evidence I have defined here and nothing else.

03:10 15 Some evidence was admitted for a limited purpose only.
03:10 16 When I instruct you that an item of evidence has been admitted
03:10 17 for a limited purpose, you must consider it only for that
03:10 18 limited purpose.

03:11 19 You have heard certain arguments and evidence regarding
03:11 20 Intel's patents. The fact that Intel has patents does not mean
03:11 21 that it has a right to use VLSI's patented technology and has
03:11 22 no impact on whether Intel has or has not infringed the
03:11 23 asserted patents.

03:11 24 Certain charts and summaries have been shown to you to
03:11 25 help -- solely to help you explain or summarize the facts

03:11 1 disclosed by the books, records and other documents that are in
03:11 2 evidence. These charts and summaries are not evidence or proof
03:11 3 of any facts unless I specifically admitted a chart or summary
03:11 4 into evidence.

03:11 5 You should determine the facts from the evidence. Certain
03:11 6 exhibits shown to you, such as PowerPoint presentations,
03:11 7 posters or models or illustrations of the evidence but are not
03:11 8 themselves evidence. It is a party's description, picture or
03:11 9 model used to describe something involved in the trial.

03:11 10 It is your recollection of the evidence. If your
03:11 11 recollection of the evidence differs from the exhibits, rely on
03:12 12 your recollection.

03:12 13 Witnesses. You alone determine the credibility, questions
03:12 14 of credibility or truthfulness of the witnesses. In weighing
03:12 15 the testimony of witnesses, you may consider the witness'
03:12 16 manner and demeanor on the witness stand, any feelings or
03:12 17 interest in the case, any prejudice or bias about the case and
03:12 18 the consistency or inconsistency of the witness' testimony
03:12 19 considered in the light of circumstances.

03:12 20 Has the witness been contradicted by other credible
03:12 21 evidence? Has the witness made statements at other times that
03:12 22 are contrary to those made here on the witness stand?

03:12 23 You must give the testimony of each witness the
03:12 24 credibility you think it deserves. Even though a witness may
03:12 25 be a party to the action, and, therefore, interested in the

03:12 1 outcome, you may accept the testimony if it is not contradicted
03:12 2 by direct evidence or by any inference that may be drawn from
03:12 3 the evidence, if you believe the testimony.

03:12 4 You are not to decide the case by counting the number of
03:12 5 witnesses who have testified for the different sides.

03:13 6 Witness testimony is weighed. Witnesses are not counted.
03:13 7 The test is not the relative number of witnesses but the
03:13 8 relative convincing force of the evidence.

03:13 9 The testimony of a single witness is sufficient to prove
03:13 10 any fact, even if a greater number of witnesses testify to the
03:13 11 contrary, if -- after you've considered all the evidence --
03:13 12 other evidence, you choose to believe a single witness.

03:13 13 Deposition testimony. Certain testimony has been
03:13 14 presented to you through a deposition. A deposition is the
03:13 15 sworn, recorded answers to a question a witness was asked in
03:13 16 advance of the trial. Under some circumstances, if a witness
03:13 17 cannot be present to testify from the witness stand, that
03:13 18 witness' testimony may be presented under oath in the form of a
03:13 19 deposition.

03:13 20 Sometime before the trial, attorneys representing the
03:13 21 party in this case questioned this witness under oath. A court
03:13 22 reporter was present and recorded the testimony. The questions
03:13 23 and answers may be shown to you. The deposition testimony is
03:13 24 entitled to the same considerations and is to be weighed and
03:14 25 otherwise considered by you in the same way as if the witness

03:14 1 had been present and had testified from the witness stand in
03:14 2 court.

03:14 3 In addition, some of the video recordings of witnesses you
03:14 4 see may be of lower quality because the witness had their
03:14 5 deposition taken from home. This was due to COVID-19
03:14 6 restrictions in place at the time and in the location where the
03:14 7 witness was located. You should not hold the quality or lack
03:14 8 of quality of the video, the location of the witness or any
03:14 9 other circumstances arising from COVID-19 restrictions against
03:14 10 either party.

03:14 11 Expert testimony is testimony from a person who has a
03:14 12 special skill or knowledge in some science, profession or
03:14 13 business. This skill and knowledge is not common to the
03:14 14 average person but has been acquired by the expert through
03:14 15 special study or experience.

03:14 16 In weighing expert testimony, you may consider the
03:14 17 expert's qualifications, the reasons for the expert's opinions
03:14 18 and the reliability of the information supporting the expert's
03:14 19 opinions as well as the factors that I previously mentioned for
03:15 20 weighing testimony of any other witness.

03:15 21 Expert testimony should receive whatever weight and credit
03:15 22 you think appropriate, given all the other evidence in the
03:15 23 case. You're not required to accept the opinion of any expert,
03:15 24 rather, you are free to accept or reject the testimony of
03:15 25 experts just as with any other witness.

03:15 1 A stipulation is an agreement. When there is no dispute
03:15 2 about certain facts, the parties may agree to stipulate to the
03:15 3 facts. You must accept a stipulated fact as evidence and treat
03:15 4 that fact as having been proven in court.

03:15 5 Do not let bias, prejudice or sympathy play any part in
03:15 6 your deliberations. Whether you're familiar with one party or
03:15 7 the other should not play any part in your deliberations.

03:15 8 A corporation and all other persons are equal before the
03:15 9 law and must be treated as equals in a court of justice. In
03:15 10 any legal action, facts must be proved by a requirement of
03:15 11 evidence known as the burden of proof.

03:16 12 The burden of proof in this case is on VLSI for some
03:16 13 issues and on Intel for others.

03:16 14 There are two burdens of proof that you apply in this
03:16 15 case. One is the preponderance of the evidence, and the other
03:16 16 is clear and convincing evidence.

03:16 17 The burden of proof applicable to VLSI in this case is
03:16 18 known as the preponderance of evidence. VLSI has the burden of
03:16 19 proving patent infringement by a preponderance of the evidence.

03:16 20 VLSI further has the burden of proving willful patent
03:16 21 infringement by a preponderance of the evidence. VLSI further
03:16 22 has the burden of proving damages for any alleged patent
03:16 23 infringement by a preponderance of the evidence.

03:16 24 A preponderance of the evidence means to prove something
03:16 25 is more likely so than not so, i.e., evidence that persuades

03:16 1 you that a claim is more probably true than not true.

03:16 2 Sometimes this is talked about as being the greater weight and
03:16 3 degree of credible testimony.

03:16 4 You may think of this preponderance of the evidence
03:16 5 standard as slightly greater than 50 percent.

03:16 6 Intel does not have any burden of proof on the issues of
03:17 7 patent infringement and damages.

03:17 8 Intel has the burden of proving patent invalidity by clear
03:17 9 and convincing evidence.

03:17 10 Clear and convincing evidence means evidence that produces
03:17 11 in your mind a firm belief or conviction as to the truth of the
03:17 12 matters sought to be established. It is evidence so clear,
03:17 13 direct, weighty and convincing as to enable you to come to a
03:17 14 clear conviction without hesitancy.

03:17 15 The standard is different from the preponderance of the
03:17 16 evidence standard which applies to VLSI's burden of proving
03:17 17 infringement or damages.

03:17 18 These standards are different from what you may have
03:17 19 learned about in criminal proceedings where a fact is proven
03:17 20 beyond a reasonable doubt. On a scale of the various standards
03:17 21 of proof, as you move from the preponderance of the evidence
03:17 22 where the proof need only be sufficient to tip the scales in
03:17 23 favor of the party proving the fact to the other end beyond a
03:17 24 reasonable doubt, where the fact must be proven by a very high
03:17 25 degree of certainty. You may think of clear and convincing

03:18 1 evidence as being between those two standards.

03:18 2 VLSI does not have any burden of proof on the issue of
03:18 3 patent validity or prior art.

03:18 4 As I did at the start of the case, I will now give you a
03:18 5 summary of each side's contentions in the case.

03:18 6 I will then provide you with detailed instructions on what
03:18 7 each side must prove to prevail on each contentions.

03:18 8 VLSI is the owner of two patents in this case. They are
03:18 9 United States Patent No. 7,523,373, the '373 patent, and United
03:18 10 States Patent No. 7,725,759 or the '759 patent.

03:18 11 These patents collectively have been referred to as the
03:18 12 VLSI patents or the asserted patents.

03:18 13 VLSI contends that Intel infringes Claims 1, 5, 6, 9 and
03:18 14 11 of the '373 patent by literal infringement and Claims 14,
03:18 15 17, 18 and 24 of the '759 patent by literal infringement and
03:19 16 under the Doctrine of Equivalents. The claims may be referred
03:19 17 to as the VLSI patent claims or a certain asserted claims.

03:19 18 VLSI contends that Intel directly infringes the asserted
03:19 19 claims by importing, making, using, offering to sell or selling
03:19 20 certain microprocessor products.

03:19 21 The names of these Intel products by code names and by
03:19 22 patents are Haswell client and Broadwell client products for
03:19 23 the '373 patent and Skylake client server, Kaby Lake client,
03:19 24 Coffee Lake client, Whiskey Lake client, Amber Lake client,
03:19 25 Cannon Lake client, Ice Lake client and server, Cascade Lake

03:19 1 server and Tiger Lake client products, including Speed Shift
03:19 2 technology for the '759 patent.

03:19 3 There are two ways in which a patent claim can be
03:19 4 infringed. First, a claim can be literally infringed.

03:19 5 Second, a claim can be infringed under what's called the
03:19 6 Doctrine of Equivalents.

03:19 7 To determine infringement, you must compare the accused
03:19 8 products with each claim that is asserted in the VLSI patents
03:20 9 that VLSI asserts is infringed.

03:20 10 Additionally, VLSI alleges that Intel willfully infringed
03:20 11 each of the '373 patent and '759 patents.

03:20 12 VLSI further contends that it is entitled to recover
03:20 13 damages for Intel's infringement.

03:20 14 Intel denies that it infringes any asserted claims of the
03:20 15 asserted patents. Noninfringement is a defense to a charge of
03:20 16 infringement. Intel also contends it has not willfully
03:20 17 infringed any asserted claim of the asserted patents.

03:20 18 In addition, Intel contends that the asserted claims of
03:20 19 the '759 patent, but not the '373 patent, are invalid.
03:20 20 Invalidity is a defense to infringement.

03:20 21 Intel contends that VLSI is not entitled to damages.

03:20 22 Although the Court and parties may have referred to the
03:20 23 claims collectively, you must conduct your invalidity analysis
03:20 24 as to each claim individually.

03:21 25 Before you can decide many of the issues in this case,

03:21 1 you'll need to understand the role of the patent claims.

03:21 2 The claims of a patent are the numbered sentences at the
03:21 3 end of the patent. The claims define the patent owner's rights
03:21 4 under the law. The claims are important because it is the
03:21 5 words of the claims themselves that define what the product
03:21 6 covers.

03:21 7 The figures and the text in the rest of the patent provide
03:21 8 a description or examples of the claimed invention. They
03:21 9 provide a context for the claims, but it is the claims that
03:21 10 define the breadth of the patent's coverage.

03:21 11 Each claim is effectively treated as if it were its own
03:21 12 separate patent. And each claim may cover more or may cover
03:21 13 less than any other claim, therefore, what a patent covers
03:21 14 collectively or as a whole depends on what each of its claims
03:21 15 cover.

03:21 16 You will first need to understand what each claim covers
03:21 17 in order to decide whether or not there's infringement of that
03:22 18 claim and decide whether or not the claim is invalid. You are
03:22 19 to use the plain and ordinary meaning of the words of the
03:22 20 patent claims as understood by a person of ordinary skill in
03:22 21 the art, which is to say in the field of technology of the
03:22 22 patent at the time of the alleged invention.

03:22 23 The meanings of the words of the patent claims must be the
03:22 24 same when deciding both the issues of invalidity and
03:22 25 infringement.

03:22 1 I'll now explain how a claim defines what it covers. A
03:22 2 claim sets forth, in words, a set of requirements. Each claim
03:22 3 sets forth its requirements in a single sentence.

03:22 4 If it is a device or method that satisfies each of the
03:22 5 requirements in that sentence, then it is covered by "infringes
03:22 6 the claim."

03:22 7 There can be several claims in a patent. A claim may be
03:22 8 narrower or broader than another claim by setting forth more or
03:22 9 fewer requirements. The coverage of a patent is assessed in a
03:22 10 claim-by-claim basis.

03:23 11 In patent law, the requirements of a claim are often
03:23 12 referred to as claim elements or claim limitations. When a
03:23 13 product or method meets all of the requirements of a claim,
03:23 14 where it meets all of its limitations or all of its elements,
03:23 15 the claim is said to cover that product or method and that
03:23 16 product or method is said to fall within the scope of that
03:23 17 claim.

03:23 18 In other words, a claim covers a product or method where
03:23 19 each of the claimed elements or limitations is present in that
03:23 20 product or method.

03:23 21 If a product or method is missing even one limitation or
03:23 22 element of the claim, the product or method is not covered by
03:23 23 that claim.

03:23 24 If the product or method is not covered by the claim, the
03:23 25 product or method does not infringe the claim.

03:23 1 The case involves two types of patent claims: Independent
03:23 2 claims and dependent claims.

03:23 3 An independent claim sets forth all of the requirements
03:24 4 that must be met in order to be covered by that claim. Thus,
03:24 5 it is not necessary to look at any other claim to determine
03:24 6 what an independent claim covers.

03:24 7 In this case the following claims are independent claims:
03:24 8 Claims 1 and 9 of the '373 patent and Claims 14 and 18 of the
03:24 9 '759 patent. The remainder of the asserted claims of the VLSI
03:24 10 patents are dependent claims. A dependent claim does not
03:24 11 itself recite all of the requirements of the claim. It refers
03:24 12 to another claim for some of its requirements.

03:24 13 In this way the claim depends on another claim. A
03:24 14 dependent claim incorporates all of the requirements of the
03:24 15 claims to which it refers.

03:24 16 The dependent claim then adds its own additional
03:24 17 requirements. To determine what a dependent claim covers, it
03:24 18 is necessary to look at both the dependent claim and any other
03:24 19 claims to which it refers.

03:24 20 A product or process that meets all of the requirements of
03:25 21 both the dependent claim and the claims to which it refers is
03:25 22 covered by the dependent claim. If any requirement of the
03:25 23 dependent claim is not met, or if any requirement of the
03:25 24 independent claim from which the dependent claim depends is not
03:25 25 met, then the product or process does not infringe that

03:25 1 dependent claim.

03:25 2 On the other hand, if the requirement of an independent
03:25 3 claim are all met but a requirement of a dependent claim is not
03:25 4 met, the independent claim is still infringed.

03:25 5 In this case the following claims are dependent claims:
03:25 6 5, 6 and 11 in the '373 patent and 17 and 24 of the '759
03:25 7 patent.

03:25 8 Comprising claims. The preamble to each of the asserted
03:25 9 claims of the VLSI patents uses the word "comprising."

03:25 10 For example, in the phrases, "a method comprising" or "a
03:25 11 system comprising," the word "comprising" means "including the
03:26 12 following" but "not excluding others."

03:26 13 A claim that includes the word "comprising" is not limited
03:26 14 to products or methods having only the elements recited in the
03:26 15 claims but also cover products or methods to add additional
03:26 16 elements.

03:26 17 For example, a claim to a table comprising a tabletop,
03:26 18 legs and glue would be infringed by a table that includes a
03:26 19 tabletop, legs and glue, even if the table also includes wheels
03:26 20 on the table's legs.

03:26 21 If you find that Intel's products or methods include all
03:26 22 of the elements to a claim, literally or under the Doctrine of
03:26 23 Equivalents where applicable, even if Intel's products or
03:26 24 methods include additional components or steps, you must find
03:26 25 that Intel's products or methods infringe the claims.

03:26 1 I like Page 23. Every page should be as long as Page 23.

03:26 2 The use of the terms "a" or "an" in a claim is a term of
03:27 3 art, which has a special meaning in the context of a patent
03:27 4 claim. When used in a claim, the term "a" or "an" means one or
03:27 5 more.

03:27 6 I will now instruct you as to the rules you must follow
03:27 7 when deciding whether or not VLSI has proven that Intel
03:27 8 infringed any of the claims of the '373 and '759 patents.

03:27 9 Patent law gives the owner of a valid patent the right to
03:27 10 exclude others from importing, making, using, offering to sell
03:27 11 or selling within the United States a product claimed in the
03:27 12 patent or performing within the United States a method claim to
03:27 13 the patent. During the term of the patent, any person or
03:27 14 business entity that is engaged in any of those acts without
03:27 15 the patent owner's permission infringes the patent.

03:27 16 Here VLSI alleges that Intel infringes the following
03:27 17 claims through its accused products: Claims 1, 5, 6, 9 and 11
03:27 18 of the '373 patent and Claims 14, 17, 18 and 24 of the '759
03:28 19 patent.

03:28 20 And in determining infringement, you must compare Intel's
03:28 21 accused products and methods to the claims of the '373 and '759
03:28 22 patents when making your decisions regarding infringement.

03:28 23 As explained further in the following instructions,
03:28 24 infringement results if the defendant makes, uses, sells or
03:28 25 offers to sell a product or method that infringes a claim,

03:28 1 either literally or under the Doctrine of Equivalents.

03:28 2 In this case VLSI asserts that Intel has directly
03:28 3 infringed each of the VLSI patents. Intel is liable for
03:28 4 directly infringing each asserted claim of the VLSI patents.
03:28 5 If you find that VLSI has proven that it is more likely than
03:28 6 not that Intel made, used, imported or offered to sell or sold
03:28 7 the invention defined in at least one claim of the patent in
03:28 8 the United States, a device recited in the claim or performed
03:28 9 in the United States, a method recited in at least one claim.

03:28 10 A party can directly infringe a patent without knowing of
03:28 11 the patent or without knowing that what the party is doing is
03:29 12 patent infringement.

03:29 13 Even if the party individually -- independently creates
03:29 14 the accused product or method, it can still infringe.

03:29 15 Literal infringement. There are two types of
03:29 16 infringement: Literal and infringement under the Doctrine of
03:29 17 Equivalents.

03:29 18 I'll now instruct you on literal infringement and then
03:29 19 will provide instruction on infringement under the Doctrine of
03:29 20 Equivalents.

03:29 21 In order to prove literal infringement of a patent claim,
03:29 22 VLSI must prove by a preponderance of the evidence that it is
03:29 23 more likely than not that Intel made, used, sold, offered for
03:29 24 sale within or imported in the United States a product or
03:29 25 process that meets all of the requirements of a claim and did

03:29 1 so without VLSI's permission.

03:29 2 You must compare the product or process with each and
03:29 3 every one of the requirements of a claim to determine whether
03:29 4 or not all the requirements of that claim are met.

03:29 5 A claim element is literally present if it exists in the
03:29 6 accused product or is performed by the accused method as it is
03:29 7 described in the claim language.

03:30 8 You must determine separately for each asserted claim
03:30 9 whether or not there is infringement for dependent claims. If
03:30 10 you find that a claim to which a dependent claim refers is not
03:30 11 infringed, there cannot be infringement of that independent
03:30 12 claim.

03:30 13 On the other hand, if you find that an independent claim
03:30 14 has been infringed, you must still decide separately whether
03:30 15 the product or method meets the additional requirements of any
03:30 16 claims that depend from the independent claim to determine
03:30 17 whether those dependent claims have also been infringed. This
03:30 18 is because the dependent claim includes all the requirements of
03:30 19 any of the claims to which it refers, plus additional
03:30 20 requirements of its own.

03:30 21 Doctrine of Equivalents. If a company makes, sells, uses,
03:30 22 offers to sell within or imports into the United States a
03:30 23 product or process that does not literally meet all the
03:30 24 limitations of a claim and then does not literally infringe
03:30 25 that claim, there can still be direct infringement if that

03:30 1 product or process satisfies the claim limitation under the
03:31 2 Doctrine of Equivalents.

03:31 3 Under the Doctrine of Equivalents, a product or process
03:31 4 infringes a claim if the accused product or process contains
03:31 5 elements or performs steps that literally meet or are
03:31 6 equivalent to each and every limitation of the claim.

03:31 7 You may find the limitation or step is equivalent to an
03:31 8 element of a claim that is not met literally if a person having
03:31 9 ordinary skill in the field of technology of the patent would
03:31 10 have considered the differences between them to be
03:31 11 insubstantial.

03:31 12 You may find that an element or step is equivalent to an
03:31 13 element of a claim that is not met literally if the element or
03:31 14 step, one, performs substantially the same function; and, two,
03:31 15 works in substantially the same way. And -- I'm sorry. No
03:31 16 "and." Three, to achieve substantially the same result as the
03:31 17 limitation of the claims.

03:31 18 In order to prove infringement by equivalents, VLSI must
03:31 19 prove the equivalency of the element or steps to the claim
03:31 20 limitation. Thus, each element of a claim must be met by the
03:31 21 accused product or process, either literally or under the
03:32 22 Doctrine of Equivalents, for you to find infringement. VLSI
03:32 23 must prove infringement by a preponderance of the evidence.

03:32 24 Known interchangeability of the claim limitation and the
03:32 25 proposed equivalent of a factor that can support a finding of

03:32 1 infringement under the Doctrine of Equivalents. In order for
03:32 2 the element or step to be considered interchangeable, the claim
03:32 3 element must have been known at the time of the alleged
03:32 4 infringement to a person having ordinary skill in the field of
03:32 5 technology of the patent. Interchangeability at the present
03:32 6 time is not sufficient.

03:32 7 VLSI contends that if you find Intel does not infringe the
03:32 8 asserted claims of the '759 patent literally, then they do so
03:32 9 and infringe the asserted claims of the '759 patent under the
03:32 10 Doctrine of Equivalents.

03:32 11 In this case VLSI argues that Intel willfully infringed
03:32 12 the asserted patents. If you have decided that Intel has
03:33 13 infringed any claims of the VLSI patents, you must go on and
03:33 14 address the additional issue of whether or not the infringement
03:33 15 was willful.

03:33 16 Willfulness requires you to determine whether VLSI proved
03:33 17 that it is more likely than not that the infringement by Intel
03:33 18 was willful. You may not determine that it was willful just
03:33 19 because you find that Intel was aware of the VLSI patents and
03:33 20 infringed them. Instead, you must also find that Intel
03:33 21 deliberately infringed the VLSI patents.

03:33 22 To determine whether Intel acted willfully, consider all
03:33 23 facts and assess Intel's knowledge at the time of the
03:33 24 challenged conduct.

03:33 25 Facts that may be considered include, but are not limited

03:33 1 to, one, whether or not Intel acted consistently with the
03:33 2 standards of behavior for the industry; two, whether or not
03:33 3 Intel intentionally copied a product of VLSI or a prior patent
03:33 4 owner that is covered by the VLSI patents; three, whether or
03:33 5 not Intel reasonably believed it did not infringe or that the
03:33 6 patent was invalid; four, whether or not Intel made a good
03:34 7 faith effort to avoid infringing the VLSI patents. For
03:34 8 example, whether Intel attempted to design around the VLSI
03:34 9 patents; and, five, whether or not Intel tried to cover up its
03:34 10 infringement.

03:34 11 An infringer may be found liable for willful infringement
03:34 12 even if it did not have actual knowledge of the patent or
03:34 13 infringement if the infringer intentionally took steps to
03:34 14 remain unaware of the patent or infringement. This is known as
03:34 15 willful blindness. Willful blindness is a factor to consider
03:34 16 with respect to willfulness.

03:34 17 An infringer may be found liable for willful infringement
03:34 18 only if it had actual knowledge of the patent or deliberately
03:34 19 infringed the patent or deliberately acted despite a risk of
03:34 20 infringement that was so obvious it should have been known.

03:34 21 I will now instruct you on the rules that you must follow
03:34 22 in deciding whether or not Intel has proven that the asserted
03:34 23 claims of the '759 patent are invalid. Intel does not contend
03:34 24 that the asserted claims of the '373 patent are invalid.

03:35 25 To prove that any claim of a patent is invalid, Intel must

03:35 1 persuade you by clear and convincing evidence. That is, you
03:35 2 must be left with a clear conviction that the claim is invalid.

03:35 3 Even though at least two Patent Office examiners have
03:35 4 allowed the asserted claims are valid, you have the
03:35 5 responsibility for deciding whether Intel has met its burden of
03:35 6 proof -- burden of proving by clear and convincing evidence
03:35 7 that the claims of the patents are invalid.

03:35 8 In order for someone to be entitled to a patent, the
03:35 9 claimed invention must actually be new over what came before,
03:35 10 which is referred to as the prior art.

03:35 11 The parties agree that Intel's Yonah processor can be used
03:35 12 as prior art.

03:35 13 VLSI denies that Intel's Yonah processor anticipates any
03:35 14 of the claims of the '759 patent because it did not have each
03:35 15 and every one of the elements of any of those claims arranged
03:36 16 as in the claim.

03:36 17 When a party challenging the validity of a patent presents
03:36 18 evidence that was not considered by the Patent Office examiners
03:36 19 during the prosecution of the application and not cumulative of
03:36 20 other evidence that was considered by the Patent Office which
03:36 21 resulted in the issued patent, such new evidence may be given
03:36 22 more weight and may make it easiest to satisfy a party's clear
03:36 23 and convincing evidence burden.

03:36 24 The patent laws of the United States require that an
03:36 25 invention must be new for a person to be entitled to a patent.

03:36 1 Anticipation must be determined on a claim-by-claim basis for
03:36 2 anticipation.

03:36 3 Intel must prove by clear and convincing evidence that all
03:36 4 the requirements of a claim are present in a single piece of
03:36 5 prior art.

03:36 6 To anticipate the claim dimension, the prior art does not
03:36 7 have the use -- have to use the same words as to the claim, but
03:36 8 all requirements of the claim must have been disclosed and
03:36 9 arranged as in the claim.

03:37 10 The claim requirements must be disclosed explicitly or
03:37 11 expressly, such that a person having ordinary skill in the
03:37 12 art -- in the art of computer processors, looking at that one
03:37 13 reference could make and use the claimed invention.

03:37 14 Damages. If you find that Intel infringed any valid claim
03:37 15 of either of the VLSI patents, you must then consider what
03:37 16 amount of damages to award to VLSI.

03:37 17 I will now instruct you about the measure of damages. By
03:37 18 instructing you on the damages, I'm not suggesting which party
03:37 19 should win the case on any issue. If you find that Intel has
03:37 20 not infringed any valid claim of either of the asserted
03:37 21 patents, then VLSI is not entitled to damages. The damages you
03:37 22 award, if any, must be adequate to compensate VLSI for its
03:37 23 infringement -- for the infringement by Intel.

03:37 24 They are not meant to punish an infringer. Your damage
03:37 25 award, if you reach this issue, should not be less than what

03:38 1 the patent holder would have received had it been paid a
03:38 2 reasonable royalty.

03:38 3 VLSI has the burden to establish the amount of its damages
03:38 4 by a preponderance of the evidence. In other words, you should
03:38 5 award only those damages that VLSI establishes that are more
03:38 6 likely than not.

03:38 7 While VLSI is not required to prove the amount of its
03:38 8 damages with mathematical precision, it must prove them with
03:38 9 reasonable certainty. You may not award damages that are
03:38 10 speculative, that are only possible or that are based on
03:38 11 guesswork.

03:38 12 In this case VLSI seeks damages in the form of what it
03:38 13 contends to be a reasonable royalty.

03:38 14 You must be careful to ensure that award is no more and no
03:38 15 less than the value that the patented inventions have provided
03:38 16 to Intel.

03:38 17 A reasonable royalty is defined as the amount the patent
03:38 18 owner and the alleged infringer would have agreed to if a
03:38 19 hypothetical negotiation had taken place at the time just prior
03:38 20 to when any infringement first began.

03:38 21 In considering this hypothetical negotiation, you should
03:39 22 focus on what the expectation of the patent owner and the
03:39 23 alleged infringer would have been had they entered into an
03:39 24 agreement at that time and had they acted reasonably in their
03:39 25 negotiation.

03:39 1 Unlike a real-world negotiation, all parties to a
03:39 2 hypothetical negotiation are presumed to believe the patents
03:39 3 are valid and infringe, and that both parties were willing to
03:39 4 enter into an agreement, the reasonable royalty that you
03:39 5 determine must be a royalty that would have resulted from the
03:39 6 hypothetical negotiation and not simply a royalty either party
03:39 7 would have preferred.

03:39 8 Evidence of things that happen after the infringement
03:39 9 first began can be considered in evaluating the reasonable
03:39 10 royalty, only to the extent that the evidence aids in assessing
03:39 11 what royalty would have resulted from the hypothetical
03:39 12 negotiation just prior to the first infringement.

03:39 13 The reasonable royalty award must be based on the
03:39 14 incremental value that the patented invention adds to the end
03:40 15 product. When the infringing products or methods have both
03:40 16 patented and unpatented features, measuring this value requires
03:40 17 a determination of the value added by the patented features.

03:40 18 An appropriate combination of royalty base and royalty
03:40 19 rate must reflect the value attributable to the infringing
03:40 20 features, if any, of the Intel products and methods and no
03:40 21 more.

03:40 22 Any amount of damages must be based on the value
03:40 23 attributable to the patented invention as distinct from
03:40 24 unpatented features of the accused products or other factors
03:40 25 such as marketing or advertising.

03:40 1 A royalty compensating the patent owner for the damages
03:40 2 must reflect the value attributable to the infringing features
03:40 3 of the product and no more.

03:40 4 The process of separating the value of the alleged
03:40 5 infringing features from the value of all other features is
03:41 6 called apportionment. When the products accused of
03:41 7 infringement for both patented and unpatented features, your
03:41 8 award must be apportioned as to what is based only on the value
03:41 9 of the patented features and no more.

03:41 10 Page 37 is my least favorite page to have to read.

03:41 11 (Laughter.)

03:41 12 THE COURT: Because it's single spaced, but I'll do it.

03:41 13 In determining the amount of reasonable royalty, you may
03:41 14 consider evidence of any of the following factors, in addition
03:41 15 to any other evidence presented by the parties on the economic
03:41 16 value of the patent: Any royalties received for licensing of
03:41 17 the patents-in-suit, proving or tending to prove an establish
03:41 18 royalty rates paid by Intel to license other patents comparable
03:41 19 to the VLSI patents; the nature and scope of the license as
03:41 20 exclusive or non-exclusive as restricted or non-restricted in
03:41 21 terms of its territory or with respect to whom the manufactured
03:41 22 product must be sold; the commercial relationship between the
03:41 23 licensor and the licensee, such as whether or not they are
03:42 24 competitors in the same territory in the same line of business;
03:42 25 the effect of selling the patented products or methods in

03:42 1 promoting other sales of the licensee, which is Intel; the
03:42 2 existing value of the claimed invention to the licensor as a
03:42 3 generator of sales of its non-patented items and the extent of
03:42 4 such collateral sales; the duration of the VLSI patents and the
03:42 5 terms of the license; the established profitability of the
03:42 6 products made under the VLSI patents; their commercial success
03:42 7 and their popularity; the utility and advantages of the
03:42 8 patented invention over the old modes or devices, if any, that
03:42 9 have been used for achieving some of the results; the nature of
03:42 10 the patented inventions; the character of any commercial
03:42 11 embodiment of it as owned and produced by or for the licensor
03:42 12 and the benefits, if any, to those that have used the claimed
03:42 13 invention; the extent, if any, to which Intel has made use of
03:43 14 the claimed invention and any evidence that shows the value of
03:43 15 that use; the portion of the profit or of the selling price
03:43 16 that may be customary in the particular business or in
03:43 17 comparable businesses to allow for the use of the inventions or
03:43 18 analogs -- analogous inventions; the portion of the profit that
03:43 19 arises from the patented inventions themselves as opposed to
03:43 20 profit arising from unpatented features, such as the
03:43 21 manufacturing process, business risks or significant features
03:43 22 or improvements added by the accused infringer; the opinion
03:43 23 testimony of qualified experts; the amount that a licensor and
03:43 24 a licensee would have agreed upon at the time of the
03:43 25 infringement began if both sides had been reasonable and --

03:43 1 reasonably and voluntarily trying to reach an agreement, that
03:43 2 is, the amount which a prudent licensee who desired as a
03:43 3 business proposition to obtain a license to manufacture and
03:43 4 sell a particular article embodying the patented invention
03:44 5 would have been willing to pay as a royalty and yet be able to
03:44 6 make a reasonable profit and which amount would have been
03:44 7 acceptable by a patentee who was willing to grant a license;
03:44 8 any other economic factor that a normally prudent business
03:44 9 person would under similar circumstance take into consideration
03:44 10 in negotiating a hypothetical license.

03:44 11 No one factor is dispositive. And you can and should
03:44 12 determine -- consider the evidence that has been presented to
03:44 13 you in the case on each of these factors.

03:44 14 You may also consider any other factor which in your mind
03:44 15 would have increased or decreased the royalty the alleged
03:44 16 infringer would have been willing to pay and the patent owner
03:44 17 would have been willing to accept acting as normally prudent
03:44 18 business people.

03:44 19 If you believe that -- that on any issue you must decide,
03:44 20 including but not limited to damages, if you determine either
03:44 21 party has failed to keep proper records, then any confusion or
03:45 22 difficulty that you encounter in resolving the issue should be
03:45 23 held against the party who failed to keep the records and not
03:45 24 against the other party.

03:45 25 The existence of any comparable damages agreement or other

03:45 1 transactions may inform your decision as to the proper amount
03:45 2 and form of the reasonable royalty award.

03:45 3 Whether a particular patent agreement or other transaction
03:45 4 is comparable to the hypothetical license depends on many
03:45 5 factors, such as whether they involve comparable technologies,
03:45 6 comparable economic circumstances, comparable structures and
03:45 7 comparable scope and agreement may be comparable even if the
03:45 8 patented technology and economic circumstances of the agreement
03:45 9 are not identical to the hypothetical license.

03:45 10 While the parties to the hypothetical negotiation assume a
03:45 11 patent is valid and infringed, an agreement may be comparable
03:45 12 even if there's been no determination or assumption by the
03:45 13 parties to the agreement that the patent is valid and
03:45 14 infringed.

03:45 15 The question is whether the agreement is sufficiently
03:45 16 comparable that it provides a reasonable indication of how the
03:45 17 parties to the hypothetical negotiation would have negotiated a
03:46 18 license to the asserted patents.

03:46 19 However, if you choose to rely upon evidence from any
03:46 20 license agreements, you must account for any differences
03:46 21 between those licenses and the hypothetically negotiated
03:46 22 license between the patent owner and the accused infringer in
03:46 23 terms of the technologies and economic circumstances of the
03:46 24 contracting parties when you make your reasonable royalty
03:46 25 determination.

03:46 1 The hypothetical license is deemed to be a voluntary
03:46 2 agreement. When determining if a license agreement is
03:46 3 comparable to the hypothetical license, you may consider
03:46 4 whether the license agreement is or was between parties who
03:46 5 were involved in a lawsuit.

03:46 6 Reasonable royalty awards can take the form of a lump sum
03:46 7 payment. A lump sum payment is equal to an amount that the
03:46 8 alleged infringer would have paid at the time of a hypothetical
03:46 9 negotiation for licensing covering all the sales of the
03:46 10 licensed product, both past and future.

03:46 11 When a lump sum is paid, the infringer pays a single price
03:46 12 for a license covering both past and future infringing sales.
03:47 13 In determining whether a lump sum payment is appropriate, you
03:47 14 may consider whether the parties to the hypothetical
03:47 15 negotiation accepted lump sum payments in connection with the
03:47 16 comparable patent agreements.

03:47 17 Reasonable royalty awards may also take the form of a
03:47 18 running royalty based on the revenue from the volume of sales
03:47 19 of the licensed products. A running royalty can be calculated,
03:47 20 for example, by multiplying a royalty base by a royalty rate.

03:47 21 Running royalty awards may also be calculated as a lump
03:47 22 sum over a certain period of time, as VLSI has done here, or as
03:47 23 an effective per-unit rate for each infringing unit multiplied
03:47 24 by the total number of infringing units.

03:47 25 All of these methods are designed to compensate the patent

03:47 1 owner for any infringement. It is up to you, based on the
03:47 2 evidence, to decide what type of royalty, if any, is
03:47 3 appropriate in this case.

03:47 4 It is now your duty -- we've basically gotten through the
03:47 5 legal part. This is -- just applies to what you're going to do
03:48 6 now. So I'm going to read this a little more slowly, and this
03:48 7 will instruct you how you're to comport yourself as jurors.

03:48 8 It is now your duty to deliberate and consult with one
03:48 9 another in an effort to reach a verdict. Each of you must
03:48 10 decide the case for yourself, but only after an impartial
03:48 11 consideration of the evidence with your fellow jurors.

03:48 12 During your deliberations, do not hesitate to reexamine
03:48 13 your own opinions and change your mind if you are convinced
03:48 14 that you were wrong, but do not give up on your honest beliefs
03:48 15 because other jurors think differently or just to finish the
03:48 16 case.

03:48 17 Remember at all times you are the judges of the facts.

03:48 18 You've been allowed to take notes during the trial. Any
03:48 19 notes that you took during the trial are only aids to your
03:48 20 memory. If your memory differs from your notes, you should
03:48 21 rely on your memory and not your notes. The notes are not
03:48 22 evidence.

03:48 23 If you did not take notes, rely on your independent
03:49 24 recollection of the evidence and do not be unduly influenced by
03:49 25 the notes of other jurors. Notes are not entitled to greater

03:49 1 weight than the recollection or impression of each juror about
03:49 2 the testimony.

03:49 3 When you go into the jury room to deliberate, you may take
03:49 4 with you a copy of this charge, the exhibits that I've admitted
03:49 5 into evidence and your notes. You must select a jury
03:49 6 foreperson to guide you in your deliberations and to speak for
03:49 7 you here in the courtroom.

03:49 8 Your verdict must be unanimous. After you have reached a
03:49 9 unanimous verdict, your jury foreperson must fill out the
03:49 10 answers to the written questions on the verdict form and sign
03:49 11 and date it.

03:49 12 After you've concluded your service and I have discharged
03:49 13 the jury, you are not required to talk with anyone about the
03:49 14 case. More about that after you conclude.

03:49 15 If you need to communicate with me during your
03:49 16 deliberations, the jury foreperson -- there'll be -- I'm going
03:49 17 to go a little off script here just because it is easier for me
03:50 18 to tell you what is going happen.

03:50 19 You'll have juror notes back there. If you want to ask me
03:50 20 a question, the very first note you're going to send me is
03:50 21 this: You're going to tell me, Ms. X or Mr. Y is the jury
03:50 22 foreperson. And that will come out here, and I will tell the
03:50 23 ladies and gentlemen who that is.

03:50 24 From then on, if while you're deliberating you have a
03:50 25 question you would like the Court to address, you write it down

03:50 1 on a jury note, you hand it to our marshal, he will bring it in
03:50 2 to me. I come in here. I discuss it with the lawyers and tell
03:50 3 them how I'm going to respond. I will write down an answer,
03:50 4 and I will send it back to you to each question. And then we
03:50 5 will keep the jury notes as part of the record in this case.

03:50 6 Let me go back to what I've written here, though, just to
03:50 7 make sure.

03:50 8 Keep in mind, however, that you must never disclose to
03:50 9 anyone, not even me, your numerical division at that time.
03:51 10 Don't ever write down, "right now we are X versus Y number of
03:51 11 people." We never -- that never gets written down. We never
03:51 12 hear anything until you tell me you have the unanimous verdict,
03:51 13 and then I'll read the unanimous verdict.

03:51 14 This again is very important because you're going to go
03:51 15 away overnight. During your deliberations, you may not
03:51 16 communicate with any information about this case to anyone by
03:51 17 any means. For example, do not talk face-to-face or use any
03:51 18 electronic device or media, such as a telephone. You -- I
03:51 19 won't read out the whole list here, but let me make sure --
03:51 20 if -- and you cannot use any form of media or technology to
03:51 21 communicate with anyone about this case.

03:51 22 The only people you can talk to about this case are the
03:51 23 seven of you, and that's within the confines of the jury -- I'm
03:51 24 calling it the jury room, but wherever it is that you all are
03:51 25 seated right now.

03:51 1 You cannot talk to anyone on the phone, correspond with
03:52 2 anyone or electronically communicate with anyone in this case.
03:52 3 Remember the oath that I gave you at the beginning, and you're
03:52 4 compelled to follow my instructions.

03:52 5 So there is one stipulation I'm going to read. And
03:52 6 remember I told you earlier, if the parties enter into a
03:52 7 stipulation, you must follow the stipulation.

03:52 8 (Sealed proceedings.)

03:52 9 MR. LEE: Your Honor, the stipulation is not public. This
03:52 10 was confidential.

03:52 11 THE COURT: I apologize, Mr. Lee.

03:52 12 Then what we will do is this: We're going to -- if --
03:52 13 with permission of counsel, we're going to take a very short
03:53 14 recess just so you all can do whatever it is you do for five or
03:53 15 ten minutes and the parties can as well.

03:53 16 What I'm going to ask is if you are not covered by the
03:53 17 protective order, please give me five minutes before you come
03:53 18 in. If you'll stay outside, I'll make sure someone tells you
03:53 19 when we begin the closing arguments. It'll be about five
03:53 20 minutes after I bring the jury in. I will read to the jury the
03:53 21 stipulation, and then we'll commence with closing arguments, if
03:53 22 that's okay with counsel.

03:53 23 MR. CHU: Yes. It is, Your Honor.

03:53 24 THE COURT: Mr. Lee?

03:53 25 MR. LEE: It's good with us, Your Honor.

03:53 1 THE COURT: I apologize for reading that portion of it. I
03:53 2 was unaware.

03:53 3 Ladies and gentlemen of the jury, I lied earlier. I will
03:53 4 tell you one more time, you cannot discuss the case amongst
03:53 5 yourselves because I have not dismissed you to begin
03:53 6 deliberating. However, that's coming soon.

03:53 7 So it is 3:53. I'm going to -- let's start at 4:10.
03:54 8 That -- you'll have 15 minutes. That'll give the lawyers an
03:54 9 opportunity to get coordinated.

03:54 10 At 4:10 I'm going to bring the jury in. I'm going to read
03:54 11 you the stipulation. And then anyone who is not -- who is part
03:54 12 of the public but not part of the protective order will be free
03:54 13 to come in and hear from counsel for the plaintiffs and
03:54 14 defendants.

03:54 15 So you can all -- you are dismissed.

03:54 16 THE BAILIFF: All rise.

03:54 17 (Jury exited the courtroom at 3:54.)

03:54 18 THE COURT: I assume there's nothing to take up?

03:54 19 MR. CHU: Something very small on the verdict form. At
03:54 20 the very end where the choice of "one-time lump sum" or
03:54 21 "royalty for past sales" was added, the lead into that reads,
03:55 22 "One, a running royalty in the form of a lump sum for past
03:55 23 damages only or, two, a lump sum for all damages," and then it
03:55 24 reverses the order.

03:55 25 So I think Ms. Proctor has already sent to opposing

03:55 1 counsel and Mr. Pearson a proposed correction, which would just
03:55 2 make it parallel in terms of the order and to use the same
03:55 3 language that's in the sentence that precedes the boxes that
03:55 4 they would check.

03:55 5 MR. TOMPROS: And, Your Honor, I don't want you to think
03:55 6 that we were not paying attention to your instructions, but
03:55 7 Ms. Proctor and I were e-mailing during the course of that, and
03:55 8 we have reached an agreement. And I think Mr. Pearson has it.

03:55 9 THE COURT: I would never assume that you weren't
03:55 10 listening. I'm surprised that anyone could survive that death
03:55 11 march, but apparently we didn't lose any jurors during the
03:55 12 course of it.

03:55 13 So but, you know, if you think about it for just a second,
03:56 14 what -- with great lawyers like you, what better lead-up would
03:56 15 you rather have to make yourselves look great than to make them
03:56 16 listen to me do that for 45 minutes?

03:56 17 If you can't -- if the two of you can't improve on what I
03:56 18 just did, then you're in the wrong profession. And I know --
03:56 19 with a hundred years of combined experience, I don't think that
03:56 20 we're in much danger of that.

03:56 21 So I'll be back in about ten minutes, and I very much look
03:56 22 forward to these closing arguments.

03:56 23 THE BAILIFF: All rise.

03:56 24 (Recess taken from 3:56 to 4:10.)

04:10 25 THE BAILIFF: All rise.

04:10 1 THE COURT: Please remain standing for the jury.

04:10 2 (The jury entered the courtroom at 4:10.)

04:11 3 THE COURT: Thank you. You may be seated.

04:11 4 Again, with reminder that no one who's not under the
04:11 5 protective order should be here for just the reading of the
04:11 6 stipulation.

04:11 7 (Sealed proceedings.)

04:13 8 THE COURT: That's the end of the stipulation.

04:13 9 Hannah, why don't you go let folks know that they can come
04:13 10 in?

04:14 11 I believe what we are handing out are notebooks that
04:14 12 contain photos of all the witnesses so that if someone is
04:14 13 referenced, you can look and it's a reminder of who the
04:14 14 witnesses were.

04:14 15 LAW CLERK: Does everybody have one?

04:14 16 THE COURT: Mr. Chu, are you ready to proceed?

04:14 17 MR. CHU: Yes, Your Honor.

04:14 18 THE COURT: You may do so.

04:14 19 OPENING ARGUMENT ON BEHALF OF THE PLAINTIFF

04:14 20 MR. CHU: May it please the Court.

04:14 21 Ladies and gentlemen of the jury, I want to thank you.

04:15 22 You were first called to jury duty quite some time ago, and
04:15 23 there were weather delays and tough times for all of us because
04:15 24 of the weather problems. But you are serving as a part of our
04:15 25 justice system, and you help make that system work well.

04:15 1 We are here in part because our founders had the foresight
04:15 2 to put a provision in the United States Constitution to promote
04:15 3 the progress of science, and that's what has happened in the
04:15 4 United States for over the last 200 years. That has made us
04:15 5 the world's leader in technology, whether it was in the 1800s,
04:16 6 the 1900s, up until today.

04:16 7 And Congress has passed statutes protecting patents and
04:16 8 invention. It's a bargain and it's simple. You disclose your
04:16 9 valuable inventions, and in exchange, no one can use your
04:16 10 inventions without permission.

04:16 11 You heard from James Spehar, a vice president at NXP. He
04:16 12 explained the relationship between NXP and VLSI and why they
04:16 13 teamed up. If somebody's using our patent and then they won't
04:16 14 work with us on licensing, it's not our expertise. So that's
04:16 15 why we would go with a company like VLSI.

04:16 16 And David Bearden, the '373 patent inventor, discussed the
04:17 17 cycle of innovation, NXP inventing and applying for patents
04:17 18 from the Patent Office and, if granted, then NXP could decide,
04:17 19 as it did here, to assign the patents to VLSI with the hope
04:17 20 that there would be reasonable royalties paid, and then there
04:17 21 would be some reinvestment into more R&D at NXP.

04:17 22 This is in some ways a complicated case, but in other ways
04:17 23 it's a simple case. And here's why: You would expect that
04:17 24 employees of the defendant, Intel Corporation, would come and
04:17 25 deny infringement. They're obviously interested. They're

04:17 1 full-time employees at Intel.

04:18 2 We have another group of witnesses from both sides, and
04:18 3 they are independent experts. They're all compensated.
04:18 4 They're all compensated pretty well. They all spent hundreds
04:18 5 of hours writing lengthy reports and having their depositions
04:18 6 taken. They've all, in total, have had compensation that may
04:18 7 be in the several hundreds of the thousands of dollars. But in
04:18 8 no case are they full-time employees of either side. They are
04:18 9 in a sense independent experts even though one side or the
04:18 10 other may engage them to come and provide testimony for you.

04:18 11 This is a credibility case. And in that sense, despite
04:18 12 all of the technology you've heard about, this case is one of
04:18 13 credibility. It's credibility of all the witnesses, but if you
04:19 14 think of the independent experts, some engaged by Intel and in
04:19 15 one case engaged by VLSI, you have the ability as well as any
04:19 16 other human being to consider and assess the credibility of
04:19 17 witnesses.

04:19 18 That's an ability that you were born with. That's an
04:19 19 ability that you learned over time. It's not something that
04:19 20 someone learns going to school. It's something you learn
04:19 21 through your life experiences.

04:19 22 And that's why in different civil cases, in criminal cases
04:19 23 and in patent cases, our system recognizes that jurors just
04:19 24 like yourself have the ability to determine the credibility of
04:20 25 one side or the other.

04:20 1 In that sense, it is a simple case despite the technology,
04:20 2 and it's a case where often, including in a patent case, the
04:20 3 case turns on credibility of expert witnesses.

04:20 4 The Court's Instruction No. 7 said, "You alone determine
04:20 5 the questions of credibility or truthfulness of the witnesses.
04:20 6 You may consider the witness' manner and demeanor, any feelings
04:20 7 or interest in the case, any prejudice or bias about the case
04:20 8 and the consistency or inconsistency of the witness'
04:20 9 testimony."

04:20 10 So let's look at some of the evidence that you heard. The
04:20 11 notebooks you have have photographs of the witnesses and lined
04:21 12 papers if you want to take notes there or in the other
04:21 13 notebooks that you've had.

04:21 14 You will not have in the jury room these sets of slides
04:21 15 being used either by VLSI or Intel in closing argument. So if
04:21 16 you want to make note of particular exhibits, they will be in
04:21 17 evidence or particular testimony that is in evidence, but these
04:21 18 slides will not be in the jury room.

04:21 19 So we heard from Dr. Rotem, an Intel employee, and he was
04:21 20 discussing Yonah. And he said, "And I said Yonah did not have
04:21 21 a hardware controller."

04:21 22 This is important because Intel is trying to invalidate a
04:22 23 patent based on their claim that Yonah anticipates, meets every
04:22 24 limitation of the claims of the patent. If one item is
04:22 25 different, it cannot anticipate and cannot, cannot invalidate

04:22 1 the patent.

04:22 2 One of the key elements in the patent claim is a
04:22 3 programmable clock controller which is a hardware controller.
04:22 4 That language is in the claims. And Dr. Rotem, before you,
04:22 5 admitted that Yonah did not have a hardware controller.

04:22 6 That's it. That's the end of their invalidity case. But
04:23 7 we'll go over some additional details.

04:23 8 Here's what Dr. Grunwald, the expert engaged by Intel,
04:23 9 said on Friday, just last week:

04:23 10 "Do you agree or disagree with that testimony of
04:23 11 Dr. Rotem?

04:23 12 Answer: "I disagree with that testimony."

04:23 13 That was very clear-cut. He didn't like what Dr. Rotem
04:23 14 said because that gives up the invalidity case. He has the
04:23 15 weekend. He comes back to court today, and what did we hear
04:23 16 this morning?

04:23 17 Dr. Grunwald:

04:23 18 Question: "You have no reason to disagree with Dr. Rotem,
04:23 19 do you?" The question coming from Intel's counsel.

04:23 20 Answer: "No. None."

04:23 21 What does that tell you about credibility? On Friday he
04:24 22 disagrees directly with Dr. Rotem. He wants to, he has to
04:24 23 because otherwise the invalidity case is gone. And then right
04:24 24 after the weekend, he comes back and directly contradicts
04:24 25 himself.

04:24 1 And there are general rules about credibility. If someone
04:24 2 is making a statement on a material fact and they change their
04:24 3 testimony, and in this case a 180-degree change, that is
04:24 4 something that you as jurors can weigh and consider.

04:24 5 Here's more. Dr. Grunwald:

04:24 6 Question: "The '759 patent specifically discussed the
04:24 7 fact that Mr. Henson wanted to make faster speed changes in the
04:24 8 processor, correct?"

04:24 9 Answer: "I can't answer that," despite his many, many
04:25 10 hours of studying the subject matter.

04:25 11 Later the same day:

04:25 12 Question: "Mr. Henson was actually claiming in the patent
04:25 13 claims a specific embodiment that could have speed changes up
04:25 14 to a million times a second, correct?"

04:25 15 And he was shown some evidence about that from the patent,
04:25 16 and he had to admit, yes. Making a 180-degree change in his
04:25 17 testimony that he had spent hundreds of hours preparing for.

04:25 18 Here's Dr. Sylvester, the other Intel expert. At first he
04:25 19 gave the testimony:

04:25 20 Question: "Is the VCCR -- let me say that that is the
04:25 21 voltage regulator, it's the first voltage regulator on the
04:25 22 bottom of Figure 1 of the patent. Is the VCCR regulating
04:26 23 during the ramp-down?" Referring to the ramp-down of the
04:26 24 voltage.

04:26 25 And this is the process where the system is trying to save

04:26 1 power if the circuit doesn't need the power, so it's ramping
04:26 2 down.

04:26 3 He answers: "No. It is not."

04:26 4 Crystal clear answer.

04:26 5 When shown evidence, he changes his testimony because he
04:26 6 can't deny it.

04:26 7 Question: "So the Intel engineers want to carefully
04:26 8 control their programmable ramp-down rate. They want to
04:26 9 control or regulate the way in which that voltage was being
04:26 10 decreased to minimize the problems with the chip; is that
04:26 11 correct?"

04:26 12 Answer: "Apparently. Yes."

04:26 13 He's saying "apparently" because he's confronted with the
04:26 14 documents that he's had a full opportunity, since this lawsuit
04:26 15 was filed or since he was engaged to study and now he has to
04:27 16 come clean.

04:27 17 Dr. Sylvester again:

04:27 18 Question: "You're familiar with problems that can occur
04:27 19 for Intel chips if the ramp-down is too fast; is that correct?"

04:27 20 Answer: "No."

04:27 21 You may remember the graphic that Professor Conte showed
04:27 22 you using water as an analogy, as if water just came crashing
04:27 23 down and broke everything. So Dr. Sylvester is saying that
04:27 24 he's not familiar with these problems.

04:27 25 Again when shown evidence:

04:27 1 Question: "So the Intel engineers want to carefully
04:27 2 control their programmable ramp-down rate to minimize the
04:27 3 problems with the chip; is that correct?"

04:27 4 Answer: "Apparently. Yes."

04:27 5 Again a 180-degree change in his testimony.

04:28 6 Dr. Sylvester again:

04:28 7 Question: "Did you find anything in the Intel documents
04:28 8 that referred to minimum retention voltage for C6 SRAM?"

04:28 9 That's the memory that's in the Lake processors.

04:28 10 "No. I did not."

04:28 11 Let me just spend a moment because in a way there are
04:28 12 three kinds of evidence.

04:28 13 There are the Intel witnesses. We expect them to deny
04:28 14 infringement. That's understandable. There are the experts
04:28 15 engaged by both sides. And then there's a third type of
04:28 16 evidence. It's documentary evidence that was in existence
04:28 17 before this lawsuit was ever filed.

04:28 18 Well, they can't change those documents. So he's saying
04:28 19 that he didn't find any documents that refer to the minimum
04:29 20 retention voltage, and then we showed him on cross-examination.

04:29 21 Question: "When Intel engineers use the phrase 'Vmin,'
04:29 22 that refers to voltage minimum, correct?"

04:29 23 Answer: "Yes."

04:29 24 "And the Vmin for the C6 SRAM was 0.75, correct? Am I
04:29 25 correct?"

04:29 1 Answer: "That's what the document says."

04:29 2 So he was claiming there were no documents that showed
04:29 3 that Intel knew there was a voltage minimum, but there it was
04:29 4 in black and white created by the Intel engineers before this
04:29 5 lawsuit.

04:29 6 Here's Dr. Grunwald again, at 5:17 p.m. on Friday:

04:29 7 Question: "That signal is an output of the high-speed
04:29 8 clock, right? Can you answer it yes or no, sir?"

04:29 9 Answer: "No. I can't answer that yes or no."

04:30 10 Seconds later:

04:30 11 Question: "You can't answer whether the 100 megahertz
04:30 12 output of the BCLCK" -- those are the letters that was on that
04:30 13 diagram that we showed you -- "shown in the Intel diagram is an
04:30 14 output of the clock; is that right? Yes or no."

04:30 15 Answer: "No. It is not."

04:30 16 By 5:18 p.m., he gives a third answer.

04:30 17 Question: "When it leaves the BCLCK on its journey to
04:30 18 another component, it's an output of the BCLCK, correct?"

04:30 19 Answer: "Correct."

04:30 20 Within the space of the minute, he gave three completely
04:30 21 different answers.

04:30 22 The BCLCK, by the way, you may remember, refers to the
04:30 23 base clock. It is the clock that is always running at
04:31 24 100 megahertz, that's always its output and it sends that
04:31 25 output to other circuitry in the Lake processors.

04:31 1 Credibility is so important. And I've shown you just a
04:31 2 sample of it. If one side has experts who testify
04:31 3 inconsistently with themselves and inconsistently with other
04:31 4 fact witnesses, or inconsistently in connection with Intel
04:31 5 documents, that's something that you can weigh during your
04:31 6 deliberations.

04:31 7 So let's look more closely at the evidence relating to the
04:31 8 '759 patent. This is the Henson or the '759 patent. You heard
04:31 9 evidence about the old approach. This is, in fact, the Yonah
04:32 10 approach, which used the Windows operating system, and
04:32 11 obviously Windows was designed outside of Intel.

04:32 12 And the '759 invention involved the programmable
04:32 13 controller that you see on the slide, and that's a programmable
04:32 14 controller that is inside the Intel chip itself.

04:32 15 And you may remember that one of the beauties of this is
04:32 16 when the Windows operating system wanted to make speed changes,
04:32 17 it would have to get in line where the core would have to do
04:32 18 the work, but the core was doing a lot of other things.

04:32 19 But with the new '759 invention, there's no waiting in
04:32 20 line to make those speed changes, just like in the very happy
04:32 21 circumstance that we sometimes experience when we're in the
04:32 22 supermarket and there's no waiting in line.

04:32 23 But here it's designed so that there is a dedicated
04:33 24 check-out line for the speed changes that would enable the
04:33 25 speed changes to be faster.

04:33 1 How much faster than the old Yonah chip? How much faster?

04:33 2 You heard evidence that the Speed Shift's 300 times faster
04:33 3 using the '759 invention in the Skylake processors than the old
04:33 4 way.

04:33 5 Intel's expert thought indeed that the old approach was
04:33 6 the only approach. He wrote this paper before he was engaged
04:33 7 by Intel for this case. The decision to change processor speed
04:33 8 and voltage must be controlled by the operating system, such as
04:33 9 Windows.

04:33 10 And when asked if he ever had any inkling of an idea of a
04:34 11 different way to do this so it would not be controlled by the
04:34 12 operating system, he would have done research and published on
04:34 13 that, and he agreed, as you can see from this answer.

04:34 14 So he's a person of extraordinary skill in the art. He
04:34 15 couldn't even think conceptionally to have those speed changes
04:34 16 done in a way not using the outside operating system.

04:34 17 Professor Conte explained that Matt Henson added a lot of
04:34 18 hardware. He added pretty much a computer-in-a-computer to do
04:34 19 this control.

04:34 20 And here you see the claim language referring to a
04:34 21 programmable clock controller having an embedded computer
04:34 22 program.

04:34 23 This is a question to Dr. Grunwald:

04:34 24 "Lake product families all have a programmable clock
04:35 25 controller having an embedded computer program?"

04:35 1 He answered, "Yes."

04:35 2 He answered very clearly yes.

04:35 3 Here's a document, Intel admits infringing Speed Shift is
04:35 4 revolutionary. And here's an area where experts on both sides
04:35 5 agree. The PCU is a programmable clock controller.

04:35 6 Does Yonah have a PCU? Professor Conte says no.
04:35 7 Dr. Grunwald says no. And Dr. Rotem also says no. So the old
04:35 8 way doesn't have the PCU. The new way has that programmable
04:35 9 controller in the Lake products.

04:35 10 One of the arguments had to do with whether a request is
04:35 11 made. This was a noninfringement argument.

04:36 12 Professor Conte explained that when you launch Word or
04:36 13 some other program, it sends to the PCU in the Lake processors
04:36 14 a request, the Core_Active signal.

04:36 15 And you may remember Dr. Grunwald's analogy that he put in
04:36 16 his expert report. And he said, if the customer or patron
04:36 17 doesn't specifically expressly ask for the check, that's not
04:36 18 asking for the check.

04:36 19 But on cross-examination he admitted to the following:
04:36 20 That if, for example, the customer does not have any
04:36 21 silverware, that's not a request for more silverware. It is a
04:36 22 statement of condition. But then he had to admit, "I don't
04:36 23 have any silverware" is a request in his mind, so the statement
04:36 24 of condition is a request.

04:36 25 So, too, if the customer's dropped a napkin on the floor

04:37 1 without saying anything to the waiter, other than "I dropped my
04:37 2 napkin on the floor," that is a statement of a condition.

04:37 3 And here's an important point to keep in mind, one could
04:37 4 twist the meaning of words, and we use words in the English
04:37 5 language, like "request," to communicate with each other.

04:37 6 But the components of a computer system are not human
04:37 7 beings. They send signals back and forth, back and forth very,
04:37 8 very rapidly. And that's what's happening in the infringing
04:37 9 products.

04:37 10 There's another issue about providing the clock frequency
04:37 11 of the high-speed clock. And here's testimony about the fact,
04:37 12 the question was if they wanted to say the same clock
04:37 13 frequency, he admitted that there was no language of that sort
04:37 14 in the claims. So he effectively was trying to add a
04:38 15 requirement for the common clock.

04:38 16 There is clear evidence that the claims at issue for the
04:38 17 '759 patent are infringed.

04:38 18 Here's evidence on the '373 patent. We say '373, David
04:38 19 Bearden is the second named inventor. You may remember the
04:38 20 keys to this invention. It was adding hardware. There were
04:38 21 two voltage regulators instead of just one, plus this
04:38 22 fast-switching mux. And what's telltale is there's no dispute
04:38 23 that's what the infringing products have, two voltage
04:38 24 regulators and a fast-switching mux.

04:38 25 David Bearden described that this was a way selectively to

04:38 1 manage the voltages between the two circuits that could save
04:38 2 power.

04:38 3 Then there was a dispute about a minimum operating
04:39 4 voltage. Dr. Sylvester created a graph specifically for this
04:39 5 litigation to present to you. Earlier that day Jonathan
04:39 6 Douglas, the Intel employee, it was a handwritten graph that
04:39 7 was almost precisely the same. Both of them showed the
04:39 8 RING_RETENTION_VOLTAGE similar to what you're looking at now
04:39 9 with one of the ring voltages, VOLTAGE_0, being below it.

04:39 10 How could it be? Because the system wouldn't work under
04:39 11 these circumstances. It just wouldn't work. The memory would
04:39 12 lose current and then wouldn't function.

04:39 13 Well, you heard the explanation from Professor Conte
04:39 14 today. Dr. Sylvester and apparently Mr. Douglas did not
04:40 15 volunteer to you that they were mixing apples and oranges.
04:40 16 Part of the data used 0 degrees Centigrade, that is the
04:40 17 equivalent of 32 degrees Fahrenheit. That's freezing. That's
04:40 18 when water freezes to ice.

04:40 19 In the Intel documents themselves, they explain how you
04:40 20 have to make adjustments, and they didn't make the adjustments.
04:40 21 They didn't mention that to you, and they didn't mention
04:40 22 that -- the following, that other data that they used for this
04:40 23 made-up graph was based on the boiling point of water
04:40 24 100 degrees Centigrade or 212 degrees Fahrenheit. And they
04:40 25 were combining data from both of those on a graph to try and

04:40 1 make this point.

04:40 2 They didn't use the Intel graph from its own documents.

04:40 3 So consider that when you are thinking about credibility. They
04:41 4 had access, obviously, to the Intel documents, and they made up
04:41 5 documents instead of using the underlying Intel documents.

04:41 6 Here's some testimony about Dr. Sylvester's faulty data,
04:41 7 where Dr. Conte made this temperature point, and then there's
04:41 8 the question about the power supply selector. And here's the
04:41 9 evidence from the Intel documents about their power supply mux.
04:41 10 And you can see the words are matching up with Element [F] in
04:41 11 the claim with the actual Intel document.

04:41 12 The Intel documents that existed before this litigation do
04:41 13 not lie. All the claims of the '373 patent are infringed.

04:41 14 And then there's the question of damages. You heard
04:42 15 testimony about the hypothetical negotiation. And the Intel
04:42 16 expert admitted this morning Intel has to assume infringement
04:42 17 by Intel of nearly a billion products. He has to assume that,
04:42 18 following the law. He also has to assume that the patents are
04:42 19 valid.

04:42 20 Here's part of the Court's instructions, that the awarded
04:42 21 damages should be no less than the value of the patented
04:42 22 inventions to Intel.

04:42 23 Power and speed are key to competition. You heard that
04:42 24 from Mr. Spehar of NXP. And he described how it could make a
04:42 25 big difference, because if you sell millions of parts or

04:42 1 billions of parts, the value to Intel would be enormous.

04:43 2 And David Bearden, the co-inventor of the '373, also
04:43 3 described this. If there are hundreds of millions of
04:43 4 microprocessors sold every year, the patent is used to save
04:43 5 even a little bit of power. In each of those sales, the
04:43 6 overall benefit and the value to Intel would be enormous.

04:43 7 You heard testimony from Professor Annavaram from USC,
04:43 8 Professor Conte who teaches at Georgia Tech, and they talked
04:43 9 about the 1.11 percent performance benefit and the 5.45 percent
04:43 10 power savings.

04:43 11 You didn't hear contrary testimony from any of the Intel
04:43 12 witnesses, fact or experts. All they did was criticize the
04:43 13 testing done by these experts. But never did they do their own
04:44 14 testing, even though they have all the ability in the world and
04:44 15 a big performance testing group to run contrary tests.

04:44 16 The patents created speed and power benefits, and there
04:44 17 were no competing calculations.

04:44 18 Here are the real-world facts in the hypothetical
04:44 19 negotiation with all the cards on the table. You see the power
04:44 20 savings amount, the additional revenue. That's additional
04:44 21 revenue, not total revenue.

04:44 22 The number of about a billion units sold. The performance
04:44 23 improvement. And in this hypothetical negotiation all that
04:44 24 information is available to both negotiators.

04:44 25 This is information -- and I'm going to give you an

04:44 1 opportunity to write it down. So you see the first row is the
04:44 2 '373 patent. And then the next number over, under "Additional
04:44 3 Revenues," those are the additional revenues from the use of
04:45 4 the '373 patent.

04:45 5 And then the next number over which starts with a three is
04:45 6 the number of infringing units. And the next two numbers are
04:45 7 the most important.

04:45 8 One is the effective rate per unit. You can see it's a
04:45 9 reasonable number of several dollars per unit. And then
04:45 10 because of the number of units sold, the total reasonable
04:45 11 royalty is the number you see in that last column that is
04:45 12 highlighted in yellow.

04:45 13 On the second row you see the same information for the
04:45 14 '759 patent. The additional revenues, the infringing units and
04:46 15 then importantly, in the last two columns, the effective rate
04:46 16 per unit, which is the easiest way to judge whether this is or
04:46 17 is not a reasonable royalty.

04:46 18 So that's a very important number, the effective rate per
04:46 19 unit for each of the two patents. And then you see the
04:46 20 reasonable royalty, the total amount, based on the number of
04:46 21 units sold.

04:46 22 Now, you see on this the exact number for the reasonable
04:46 23 royalty, but I'm going to just round it off and make it easier.
04:46 24 Because when we see numbers, it's very hard for us to determine
04:46 25 how to think about it.

04:46 1 Now, I've put in black those two numbers but in a way
04:46 2 that's easier for us to understand what they are. Again, here
04:46 3 you see the reasonable per-unit rates. And then let's look at
04:47 4 Intel's excuses.

04:47 5 They asked, I think, about every witness that came up,
04:47 6 fact or expert, whether it was used by Freescale or NXP. As
04:47 7 David Bearden explained, NXP has thousands of products.
04:47 8 Figuring it out would be a nearly full-time job for many years.
04:47 9 There'd be no reason to do it because NXP has permission to use
04:47 10 the invention that they had developed. And it's not related at
04:47 11 all to whether Intel infringes.

04:47 12 From the first witness who was asked the question, the
04:47 13 witness responded with the full answer, but they wanted to ask
04:47 14 every witness the same thing.

04:47 15 Here's a jury instruction where in determining
04:47 16 infringement you must compare Intel's accused products and
04:47 17 methods to the claims of the patents.

04:48 18 Next excuse, Intel says -- claims it has no knowledge of
04:48 19 the patents. But a party can infringe a patent without knowing
04:48 20 of the patent or without knowing that what the party is doing
04:48 21 is patent infringement. That's the law as you can see.

04:48 22 And here's Intel's infringement with the date of the grant
04:48 23 of the '759 patent, when Intel was designing those products,
04:48 24 when Intel launched its '759 technology and then all of those
04:48 25 processors that it brought online year after year after year so

04:48 1 that they became their mainstream processors across the board.

04:48 2 The next excuse by Intel was to say, oh, we did
04:48 3 independent development. But even if a party independently
04:48 4 creates the accused product, it can still infringe. And that
04:49 5 was part of the judge's instruction earlier this afternoon.

04:49 6 The next excuse was witnesses never heard of the patent
04:49 7 numbers. Well, they're incredibly famous inventions. Edison's
04:49 8 invention that relates to the patent on light bulbs as an
04:49 9 example. The Wright brothers had patents on their flying
04:49 10 machine. Nobody knows the patent numbers, but engineers know
04:49 11 when there's a great advance and engineers know when it's put
04:49 12 into as many as a billion products. They just don't recognize
04:49 13 the patent numbers.

04:49 14 Intel has sold nearly a billion processors that infringe
04:49 15 these two patents. That's uncontradicted.

04:49 16 In conclusion, the United States Patent Office awarded the
04:49 17 patents after careful examination. The evidence shows that
04:49 18 Intel infringes and the damages are based on about a billion
04:50 19 Intel products that use the patented technology.

04:50 20 Thank you very much, ladies and gentlemen.

04:50 21 CLOSING ARGUMENT ON BEHALF OF THE DEFENDANT

04:50 22 MR. LEE: Your Honor, ladies and gentlemen of the jury,
04:50 23 Mr. Mueller and I will be splitting the closing. He will be
04:50 24 closing to you first, then I will follow him and finish for us.

04:50 25 MR. MUELLER: Good afternoon, ladies and gentlemen. And I

04:50 1 want to start by saying thank you for your careful time and
04:50 2 attention over the last week. We are grateful. And on behalf
04:51 3 of my colleagues and our client Intel, I just want to say thank
04:51 4 you.

04:51 5 Now, you have seen all of the evidence go in over the last
04:51 6 week. And a series of witnesses have walked right here past
04:51 7 you to the witness stand. And each of them stopped along the
04:51 8 way and they took the oath. And they swore to tell the truth,
04:51 9 the whole truth and nothing but the truth.

04:51 10 And I -- even if you're not a trial lawyer, you've
04:51 11 probably heard that many times over the years in movies and TV
04:51 12 shows. And sometimes you can hear it and not really think
04:51 13 about what it means, but it's important. It's very important
04:51 14 to our system of justice to take the stand, take the oath, tell
04:51 15 the truth. Tell the whole truth. And that's what we tried to
04:51 16 do over this case. The best way to help a jury like yourselves
04:51 17 reach a fair and just result is to tell the truth.

04:51 18 So what we have done is called as witnesses three top
04:52 19 Intel engineers with personal knowledge of how these products
04:52 20 were created. They helped to create them themselves. Two of
04:52 21 them are Intel fellows. That means they're among the top 120
04:52 22 engineers out of 70,000 engineers at Intel. Those two are
04:52 23 among the top 120.

04:52 24 The third engineer we called is a distinguished software
04:52 25 engineer, one of the most experienced engineers in writing that

04:52 1 type of computer code you heard about. Three extraordinary
04:52 2 engineers.

04:52 3 We also called Mr. King who had many years at the company
04:52 4 and has explained the history of it to you.

04:52 5 We called two university professors, each of whom were
04:52 6 experts in the field.

04:52 7 We called Mr. Huston who worked at IBM for over 30 years,
04:52 8 for 22 years of experience sitting at the table negotiating
04:52 9 license agreements.

04:52 10 Now, we called all these folks to give you the truth, to
04:53 11 give you the whole truth about what happened in this case and
04:53 12 what matters.

04:53 13 Now, I agree with Mr. Chu. I think all of my colleagues
04:53 14 agree with Mr. Chu on one point. Credibility is critical.
04:53 15 It's critical. And you are the judges of credibility in this
04:53 16 case. It's your job to figure out who came to you and did the
04:53 17 best job they could to explain the facts, explain the evidence,
04:53 18 to explain the truth.

04:53 19 Now, again and again -- and you saw it again just now in
04:53 20 Mr. Chu's closing argument -- you've seen VLSI show you
04:53 21 portions of documents, and then later on we'd show you the rest
04:53 22 of the document or portions of a deposition transcript and then
04:53 23 we had to show you the rest of it. Again and again and again,
04:53 24 that's happened.

04:53 25 We were trying to give you the full truth the whole way

04:53 1 through this trial, and that's what I'm going to try to do
04:53 2 right now one last time.

04:53 3 Now, Mr. Chu told you in his opening statement that there
04:54 4 are two stars, two heros in this case. That was a promise that
04:54 5 he made to you about what the evidence was going to show.

04:54 6 Now, you've seen the evidence and you know it's just not
04:54 7 true. Mr. Spehar, the very first witness:

04:54 8 "You hadn't even heard of these two patents until very
04:54 9 recently, correct?

04:54 10 "Until my deposition."

04:54 11 Dr. Conte, Dr. Annavaram, Dr. Sullivan, the three experts,
04:54 12 none of them had heard of these patents before this lawsuit.

04:54 13 The Intel engineers, Mr. Douglas, Dr. Rotem,
04:54 14 Mr. Borkowski, they hadn't heard one word about these patents
04:54 15 before this case started. Not one word.

04:54 16 Dr. Sylvester, Dr. Grunwald, Mr. Huston never heard
04:54 17 anything about these patents, these heros and stars. Never
04:55 18 heard one word about them until this case started.

04:55 19 Now, Mr. Bearden was actually one of the named inventors
04:55 20 in the '373 patent. He testified when VLSI's lawyer asked him
04:55 21 questions about the patent. And then it turned out when
04:55 22 Ms. Sooter cross-examined him, we learned at his deposition he
04:55 23 barely remembered anything about it. He didn't remember any
04:55 24 details of the path to the patent. And, in fact, he said that
04:55 25 he was asked, "Hey, do you remember this patent?" And, you

04:55 1 know, after a little bit of head scratching, then he kind of
04:55 2 said, "yeah, vaguely."

04:55 3 Just think about that. This is one of the inventors on
04:55 4 one of the patents. He said it was a head-scratching moment to
04:55 5 try to remember this patent. If it were a hero, if it were a
04:55 6 star, you can rest assured the inventor would have remembered
04:55 7 it.

04:55 8 Now, Dr. Zhang is another inventor on the '373 patent, and
04:55 9 you heard a portion of his videotaped deposition. And I'm
04:55 10 going to ask Mr. Lee to play it one more time.

04:56 11 "In your own words, can you tell (audio distortion) the
04:56 12 '373 patent is?"

04:56 13 "I did not write this document. I don't remember it."

04:56 14 Didn't remember it. And you heard him say that over and
04:56 15 over again at his deposition.

04:56 16 Now, Mr. Bearden said that tracking down where the
04:56 17 invention might have been used in actual product would have
04:56 18 been, as he said, would be formidable, right? A full-time job
04:56 19 for many years.

04:56 20 So he was essentially saying, don't blame us for not
04:56 21 knowing whether we used these patents. It's sort of hard to
04:56 22 track down whether the products were actually using the
04:56 23 inventions, as if they were an old pair of socks with holes in
04:56 24 them. Hard to track down.

04:56 25 These are supposed to be incredible inventions, according

04:56 1 to VLSI, that provide great performance benefits. If that's
04:56 2 true, if that's true, you wouldn't have to track it down.
04:56 3 You'd know it. You'd know it. More than that, you'd want it.
04:56 4 You'd want to take these patents and put them into an actual
04:57 5 product.

04:57 6 But they couldn't identify a single product out of the
04:57 7 thousands, thousands of NXP products that actually used these
04:57 8 patents, and the only conclusion you can draw is that there is
04:57 9 no such product.

04:57 10 They've never used these two patents in actual products.
04:57 11 If they were such great ideas, they had every incentive in the
04:57 12 world to do so. They compete in the marketplace against
04:57 13 companies, including Intel. They're looking for ways to make
04:57 14 their products better.

04:57 15 If these were truly heros and stars, they would have used
04:57 16 them. And the reason why we have focused on this issue
04:57 17 throughout the case is because it does go to credibility. It
04:57 18 goes to the credibility of the claim that you heard in the
04:57 19 opening statement, that these are heros and stars. Well,
04:57 20 they're not. If they were, they would have been used.

04:57 21 Now, witness after witness confirmed this. Mr. Bearden,
04:57 22 "I don't know of any particular product." Dr. Zhang, "don't
04:57 23 remember." Mr. Spehar couldn't identify any either.

04:58 24 Dr. Conte said it wasn't his task to identify a product
04:58 25 made by SigmaTel, Freescale, NXP or VLSI that used these

04:58 1 patents. Dr. Annavaram couldn't identify one either.

04:58 2 Now, I'm going to examine the two infringement claims one
04:58 3 by one. Before I do, I just want to cut to the heart of what
04:58 4 they're saying here.

04:58 5 There's not a shred of evidence that the Intel engineers
04:58 6 copied these patents. Not a shred of evidence. There's no
04:58 7 evidence that they had these patents in one hand and were doing
04:58 8 design work in the other.

04:58 9 So the gist of the claim that's being made to you, the
04:58 10 jury, is that the Intel engineers accidentally ended up within
04:58 11 the claims of these patents.

04:58 12 Now, as a legal matter, that is possible. You can
04:58 13 accidentally infringe a patent as a matter of law, but as a
04:58 14 factual matter, it didn't happen here. It just did not happen
04:58 15 here. That's not what happened.

04:59 16 So let's look at the patents one by one, and let's start
04:59 17 with the '373 patent.

04:59 18 Now, in terms of what's at issue for the '373 patent, you
04:59 19 heard from Mr. Douglas who's a lead architect for decades at
04:59 20 Intel, along with Mr. Borkowski, the distinguished software
04:59 21 engineer who has personally written much of that special kind
04:59 22 of computer code you heard about, the P-code. And they
04:59 23 described for you the power architecture in portions of the
04:59 24 Broadwell and Haswell processors that are accused of
04:59 25 infringement by the '373 patent.

04:59 1 Now, throughout this case we did our best to try to
04:59 2 explain the facts as best we could, and we wanted you to
04:59 3 understand the facts because we believe the truth is on our
04:59 4 side.

04:59 5 So we used things like magnet boards and all sorts of
04:59 6 stuff to have the witnesses help explain the facts to you as
04:59 7 best we could. And this is the board that we put together with
04:59 8 Mr. Douglas, and it shows the components within the ring
05:00 9 domain. It shows these two power supplies, the VCCR and the
05:00 10 VCCIO. It shows the package control unit that controls the
05:00 11 switch that allows for switching between these two power
05:00 12 supplies, the VCCR and the VCCIO.

05:00 13 Now, of course this is a simplified diagram. There's
05:00 14 thousands upon thousands of components in these chips, but
05:00 15 what's at issue here is the power supply to this memory called
05:00 16 the C6 SRAM.

05:00 17 And as you learned, when the ring components are in
05:00 18 operation, the power supply comes from the VCCR and it comes at
05:00 19 different power levels depending on the level of activity of
05:00 20 the components within the ring domain.

05:00 21 When the components in the ring domain are no longer being
05:00 22 used, the PCU flips the switch and it goes to the VCCIO, which
05:00 23 supplies power to the C6 SRAM in that circumstance.

05:00 24 So this is the architecture at issue. It's developed by
05:01 25 Mr. Douglas and his colleagues. Mr. Borkowski and other folks

05:01 1 created the computer code that implements the architectural
05:01 2 designs of Mr. Douglas and his colleagues. And that's how it
05:01 3 works. It does not remotely use the '373 approach, and I'm
05:01 4 going to explain exactly how.

05:01 5 Here's the claims, okay? Here are the claims at issue for
05:01 6 the '373 patent. And I have shown the language from each and
05:01 7 every part of these claims. To infringe a claim, as you heard
05:01 8 from His Honor, a product needs to do everything required by
05:01 9 that claim. You need to look at every single part of it and
05:01 10 find something that matches either literally or equivalently
05:01 11 each and every part of the claim. If one part is missing,
05:01 12 there's no infringement.

05:01 13 Now, as you're going to see, there are actually several
05:01 14 parts that are missing if you compare these claims to the
05:01 15 architecture that Mr. Douglas, Mr. Borkowski and their
05:02 16 colleagues developed.

05:02 17 And as we go through this, I want to emphasize that the
05:02 18 burden of proof is on VLSI. They bear the burden on
05:02 19 infringement. They need to convince you that each and every
05:02 20 part of those claims is actually in the Intel products. So
05:02 21 let's go through it.

05:02 22 First, the claims require determining a minimum operating
05:02 23 voltage of the memory and storing the minimum operating voltage
05:02 24 of the memory and then doing certain things with it, which
05:02 25 we're going to come back to. But just at the very outset, it

05:02 1 requires determining and storing the minimum operating voltage
05:02 2 of the memory.

05:02 3 Now, it turns out, as Mr. Douglas explained to you, that's
05:02 4 a complicated, inefficient process to even go about doing that,
05:02 5 and Dr. Sylvester, Intel doesn't do that. It does not
05:02 6 determine the minimum operating voltage of the memory and store
05:02 7 it, then use it in the way that the claims describe. It uses a
05:02 8 very different architecture.

05:02 9 Now, there's a couple of things that are problems with the
05:03 10 theory that Dr. Conte, who's the one and only one witness this
05:03 11 entire trial who says that Intel infringes. The only one is
05:03 12 Dr. Conte. He's referring to something called the
05:03 13 RING_RETENTION_VOLTAGE, and he's claiming that's minimum
05:03 14 operating voltage of the memory. Okay. That's the claim
05:03 15 requirement of the memory.

05:03 16 He says it's the RING_RETENTION_VOLTAGE. Well, there's
05:03 17 one problem right at the outset. It is related to the entire
05:03 18 ring domain. He conceded this on cross-examination:

05:03 19 "What it's referring to is the entire ring domain,
05:03 20 correct?

05:03 21 "That's correct."

05:03 22 Here's the ring domain. You've learned about all of the
05:03 23 various components within it. It's not just the C6 SRAM. It's
05:03 24 a whole series of components. So it's not the minimum
05:03 25 operating voltage of the memory. Even what he's referring to

05:03 1 is a ring domain retention voltage, not a memory retention
05:03 2 voltage.

05:03 3 There's a second problem. It's not a minimum. Now,
05:03 4 Mr. Chu seemed to suggest just now that Mr. Douglas and
05:04 5 Dr. Sylvester were somehow making this up. They were. These
05:04 6 are the facts about how this works.

05:04 7 This is a diagram that you can see right here, that Dr. --
05:04 8 I'm sorry -- Mr. Douglas testified to. It shows the various
05:04 9 power supply levels that come out of the VCCR when the VCCR is
05:04 10 being used to supply power to the ring domain. He testified
05:04 11 about the RING_VF_VOLTAGE_0, the RING_VF_VOLTAGE_1, the
05:04 12 RING_VF_VOLTAGE_2, and he compared it to the
05:04 13 RING_RETENTION_VOLTAGE, which is at a higher level than the
05:04 14 RING_VF_VOLTAGE_0.

05:04 15 Dr. Sylvester confirmed this through analyses of 8 million
05:04 16 chips, but Mr. Douglas was on the stand and he testified about
05:04 17 this. Now, you just heard a few minutes ago a suggestion that
05:04 18 Mr. Douglas and his colleagues, I think to be blunt, the
05:04 19 suggestion was they were lying to you. You have to remember
05:04 20 you heard them testify.

05:05 21 When they testified and when they were cross-examined and
05:05 22 left the stand, did you think they were lying, or did you think
05:05 23 that person just gave me useful information both on direct and
05:05 24 cross-examination?

05:05 25 And I would respectfully submit to you the record supports

05:05 1 the latter. Each one of these engineers, including
05:05 2 Mr. Douglas, took the stand to testify to the truth and
05:05 3 provided the facts to you, including with respect to these
05:05 4 power supply levels.

05:05 5 Mr. Douglas wasn't even asked about this temperature
05:05 6 theory that we heard about for the first time today. If that
05:05 7 was significant, if this temperature theory we heard from
05:05 8 Dr. Conte near the very end of the trial was important, why
05:05 9 didn't they ask Mr. Douglas a single question about it? Not
05:05 10 one. And as he said on the stand, the voltage level is higher
05:05 11 in RING_VF_VOLTAGE_0 as compared to the
05:05 12 RING_RETENTION_VOLTAGE.

05:05 13 Now, there was also some reference at the trial to this
05:06 14 Vmin, and Mr. Chu just mentioned it now. And there's a couple
05:06 15 things to say about that.

05:06 16 First, this came up for the first time during the
05:06 17 cross-examination of Dr. Sylvester. Mr. Chu cross-examined,
05:06 18 including using this document. You see that reference to Vmin?
05:06 19 There was a suggestion made that that was somehow related to
05:06 20 the RING_RETENTION_VOLTAGE. But Mr. Chu did not show
05:06 21 Dr. Sylvester the whole document.

05:06 22 And if you look at the whole document, you can see the
05:06 23 right-hand side, it refers to read and write information. It's
05:06 24 not referring to retention. It's referring to reading and
05:06 25 writing to memory, which is a different thing than retention.

05:06 1 This is a good example of how when you look at the full
05:06 2 document, you see the full truth, the theory collapses.

05:06 3 But it's more than that. Dr. Conte didn't even refer to
05:06 4 this Vmin in his original testimony when he was explaining his
05:06 5 infringement theory. It was something that was mentioned for
05:06 6 the first time by Mr. Chu in cross-examining Dr. Sylvester.

05:07 7 And not even that. If this was significant, again, they
05:07 8 would have asked Mr. Douglas about it. They didn't ask him a
05:07 9 single question about it. They had the -- one of the lead
05:07 10 architects for the chips sitting there on the witness stand,
05:07 11 didn't ask one question about it. It's a sideshow. It's not
05:07 12 relevant.

05:07 13 Now, Dr. Sylvester said:

05:07 14 "Does this chart have anything to do with
05:07 15 RING_RETENTION_VOLTAGE?

05:07 16 "No.

05:07 17 "Does it have anything to do with what Dr. Conte
05:07 18 identified as the minimum operating voltage for his
05:07 19 infringement analysis?

05:07 20 "No. It doesn't."

05:07 21 And that's the truth.

05:07 22 So for all these reasons the RING_RETENTION_VOLTAGE is not
05:07 23 the minimum operating voltage of the memory, and that alone is
05:07 24 reason to stop there. There's no infringement.

05:07 25 But we can see there's further problems. There's no

05:07 1 regulated voltage that triggers a switch between the power
05:07 2 supplies. That is to say the minimum operating voltage is not
05:07 3 used to make the decision to switch between these two. Instead
05:07 4 it's something called the Package C7 sleep state. When it goes
05:08 5 into that state, the switch is flipped. It has nothing to do
05:08 6 with the minimum operating voltage.

05:08 7 And that's a second problem.

05:08 8 The third problem is the claim requires that both of these
05:08 9 power supplies supply power-regulated voltages simultaneously.
05:08 10 And Mr. Douglas explained to you that doesn't happen.

05:08 11 When the switch is flipped from the VCCR to the VCCIO, the
05:08 12 VCCR no longer supplies a regulated voltage in that scenario.
05:08 13 It's not supplying a stable supply of electricity to the
05:08 14 components in the ring domain, and they're no long operable.

05:08 15 So that's a third reason why there's no infringement of
05:08 16 the '373 patent.

05:08 17 If you put all these reasons together, you can see the
05:08 18 long series of Xs. All we need is one to show noninfringement,
05:08 19 but there's actually many. It's a completely different
05:08 20 architecture that neither literally or equivalently infringes
05:08 21 the patent.

05:08 22 And to sum up, the claim requires storing the minimum
05:09 23 operating voltage. The RING_RETENTION_VOLTAGE is not the
05:09 24 minimum operating voltage. Claims require using the minimum
05:09 25 operating voltage for voltage selection. The architecture of

05:09 1 Mr. Douglas and his colleagues uses Package C7 sleep state
05:09 2 instructions instead. And the architecture of the '373 patent
05:09 3 requires supplying two regulated voltages at the same time, and
05:09 4 that just doesn't happen in the Intel chips.

05:09 5 So let's go to the second patent, and this is a really a
05:09 6 tale of two time periods. First, we're in the early 2000s.
05:09 7 Yonah, it is undisputed, came before the '759 patent was
05:09 8 invented. And that was back in the early 2000s.

05:09 9 And you've see the Yonah architecture. You know it was
05:09 10 the very first Intel chip to have two core processors. And it
05:09 11 was developed by Dr. Rotem and his colleagues.

05:09 12 This had several key characteristics. It used explicit
05:09 13 requests to change clock frequencies. It had a programmable
05:10 14 clock controller. It used the same frequency for all
05:10 15 components. And the operating system ran on the core. That
05:10 16 was how Yonah worked as Dr. Rotem explained to you.

05:10 17 Now, the only real issue here is did Yonah include a
05:10 18 programmable clock controller?

05:10 19 And this is another one of those examples where Dr. Rotem
05:10 20 was asked about two lines of deposition testimony, and then we
05:10 21 came back and showed him the whole transcript. And he
05:10 22 explained that it did have a programmable clock controller. It
05:10 23 was a mixture of hardware and software. It didn't have a
05:10 24 hardware-only controller, as he testified, but it had a mix of
05:10 25 hardware and software that together constituted the

05:10 1 programmable clock controller.

05:10 2 That was the same issue that came up with Dr. Grunwald,
05:10 3 and he said the same thing. It had a programmable clock
05:10 4 controller. It didn't have a hardware-only clock controller.
05:10 5 And that's really the only way in which they've tried to
05:10 6 dispute that Yonah is different from the patent.

05:10 7 Yonah was not in front of the Patent Office. At one point
05:11 8 there was -- during Mr. Chu's cross-examination of
05:11 9 Dr. Grunwald, he suggested that the Patent Office had in front
05:11 10 of it SpeedStep, which was a clock-control technology. But as
05:11 11 you learned this morning, the type of SpeedStep technology was
05:11 12 for the Pentium III chip. That was one core, a single core.
05:11 13 Yonah had two.

05:11 14 It was the first two-core processor. Why does that
05:11 15 matter? It matters because the '759 patent requires two master
05:11 16 devices. Yonah had it, one, two. And the Patent Office didn't
05:11 17 know about that. If the Patent Office had known about Yonah,
05:11 18 we believe the patent would not have issued. As Dr. Grunwald
05:11 19 said, the Patent Office did not consider Yonah when deciding to
05:11 20 grant this patent.

05:11 21 And if you look at each part of the claims, and we
05:11 22 encourage you to look at each and every portion of the claims
05:11 23 at issue, you will find that Yonah had all of them. And
05:11 24 therefore these claims are invalid.

05:11 25 So to sum up, Yonah had requests. It provided a single

05:12 1 clock frequency to all of the different components. It had the
05:12 2 one clock. It had a programmable clock controller, and the
05:12 3 core master devices provide the request.

05:12 4 Well, now let's fast forward 11 years, to 2015, and talk
05:12 5 about a very different architecture in the Lake series
05:12 6 processors.

05:12 7 You heard about this from Dr. Rotem again. He was
05:12 8 involved in both the early 2000s work and the work in the
05:12 9 mid-2010s, and Mr. Borkowski, who was involved in implementing
05:12 10 some of the architectural designs of this clock control
05:12 11 architecture.

05:12 12 Dr. Rotem actually created a Ph.D. dissertation on some of
05:12 13 the ideas that ultimately went into the Lake series processors,
05:12 14 and he received a Ph.D. So he wrote this long paper describing
05:12 15 his ideas, received a Ph.D. based on those ideas in recognition
05:13 16 for the quality of his work.

05:13 17 He also presented that work at the Institute of Electrical
05:13 18 and Electronics Engineers, a prestigious organization. He
05:13 19 wrote a paper. It was accepted for publication in an IEEE
05:13 20 journal.

05:13 21 Now, at that time IEEE learned of his work. Did anyone
05:13 22 say to him -- was there any evidence to you that someone said
05:13 23 to him, hey, didn't you know that was in a patent I filed many
05:13 24 years ago?

05:13 25 No one said that.

05:13 1 This was recognized as a new approach, which Dr. Rotem and
05:13 2 his colleagues believed was revolutionary. That document that
05:13 3 you've seen from VLSI a few times that uses the word
05:13 4 "revolutionary," that's referring to his idea, Dr. Rotem's
05:13 5 idea, the work of he and his colleagues. They were proud of
05:13 6 it. They were proud of the work that they had done, and they
05:13 7 presented it publicly to IEEE.

05:13 8 And you can see it right here in this board. It took
05:13 9 multiple clocks, independent clocks, no requests. Instead
05:14 10 there's autonomous control. It's a much more sophisticated
05:14 11 structure than the Yonah structure from 11 years before. This
05:14 12 allows for calibrating the frequency of different components
05:14 13 using independent clocks.

05:14 14 If the graphics processor is particularly busy, you
05:14 15 increase the frequency of the clock for the graphics processor
05:14 16 and so on. Different clocks for different components. It's a
05:14 17 very high power -- very powerful and efficient approach that
05:14 18 reflects the hard work of Dr. Rotem and his colleagues. And
05:14 19 it's quite different from the '759 claims.

05:14 20 No. 1, the claims require that a request be made from
05:14 21 master devices, like the cores, for a change in clock
05:14 22 frequency. And as you've learned, that's just not how it
05:14 23 works.

05:14 24 As Dr. Rotem explained, what triggers those components to
05:14 25 provide information, "components" meaning the cores, including

05:14 1 something you learned about called the C0 residency
05:14 2 information, what triggers them to provide this information to
05:15 3 the PCU? Nothing. It goes all the time, even when the cores
05:15 4 are asleep. No request? No request.

05:15 5 As you heard, it's like a train. It arrives on a regular
05:15 6 schedule to the PCU. It's a set of data. There's actually
05:15 7 many portions of data called telemetry information that goes to
05:15 8 the PCU. The PCU conducts complicated analyses of it, then the
05:15 9 PCU decides what to do.

05:15 10 So instead of the old system where the core would make a
05:15 11 request to change the clock, in this system the cores transmit
05:15 12 information to the PCU. The PCU is the brain that does the
05:15 13 analysis, and the PCU decides when to change the different
05:15 14 clocks. Completely different, much more advanced architecture
05:15 15 than the '759 patent, which was nearly a decade before it.

05:15 16 Dr. Conte confirmed that -- just as he said here:

05:15 17 "Isn't it true that you also testified in the same
05:15 18 deposition that periodic reading of information is not a
05:15 19 request?

05:15 20 "Yes.

05:16 21 "All right. So you described the accused feature as
05:16 22 periodic, correct?

05:16 23 "Yes.

05:16 24 "And you said on the very next page that a periodic
05:16 25 push-out of information is not a request, correct?

05:16 1 "That's correct."

05:16 2 Periodic push-out of information to the PCU is not a
05:16 3 request. Despite Mr. Chu's best attempts to use restaurant
05:16 4 analogies to turn it into a request, it's just not. It's not a
05:16 5 request. It's the transmission of information to the PCU. The
05:16 6 PCU does the analysis. The PCU makes the decisions. There's
05:16 7 no request.

05:16 8 And that's the first independent reason why none of the
05:16 9 claims are infringed.

05:16 10 Second, if you look at the claim language, and we
05:16 11 encourage you to read it precisely, every word, it talks about
05:16 12 providing a request to change a clock frequency of a high-speed
05:16 13 clock. And then a little bit lower, providing the clock
05:16 14 frequency of the high-speed clock to a second master device,
05:16 15 and then a little bit later, providing the clock frequency of
05:16 16 the high-speed clock.

05:17 17 So we have a request for a clock frequency of a high-speed
05:17 18 clock, and then we have cross-references to the, the clock
05:17 19 frequency of the high-speed clock. It's referring to a single
05:17 20 clock frequency in the claim.

05:17 21 We're not trying to rewrite it. We're trying to read this
05:17 22 precisely as it's written word for word.

05:17 23 And if you look at that type of architecture, Yonah had it
05:17 24 first. They had a single clock.

05:17 25 The Lake series processors have nothing like that.

05:17 1 Multiple clocks independent for different components, and
05:17 2 that's the second reason why there's no infringement. As
05:17 3 Dr. Rotem confirmed, different clocks, different speeds.

05:17 4 And you saw Dr. Grunwald show you exactly what that meant.
05:17 5 '759, you move the speeds in lockstep. In the Intel
05:17 6 architecture developed by Dr. Rotem, Mr. Borkowski and their
05:17 7 colleagues, there's independent clock control of the different
05:17 8 components.

05:17 9 That's the second reason why the '759 claims are not
05:18 10 infringed.

05:18 11 Put them all together and, again, you have many reasons
05:18 12 why these claims are not infringed. We only need one, but
05:18 13 there's many. It's just a very fundamentally different
05:18 14 architecture. It's much more advanced than the nearly decade
05:18 15 old '759 patent.

05:18 16 So to sum up, the '759 patent requires requests. The Lake
05:18 17 series processors of the 2015 and onward time period don't have
05:18 18 them. The '759 patent requires providing the clock frequency
05:18 19 of the high-speed clock, the clock frequency. The Intel
05:18 20 products don't do that. They use multiple independent clocks.

05:18 21 So, again, it's a tale of two time periods. In the early
05:18 22 2000s, Yonah came first. Yonah had all of these ideas before
05:18 23 the '759 patent was even filed. And you can't file a patent on
05:18 24 ideas that somebody else already came up with.

05:18 25 And if you fast forward 11 years, the Lake series

05:18 1 processors use a far more advanced architecture that is
05:18 2 different in kind from anything like the '759 patent.

05:18 3 Now, the amount of money owed by Intel is zero. There's
05:19 4 no infringement of these patents, and the '759 patent is
05:19 5 invalid. But we've examined the damages case here for a couple
05:19 6 of reasons, most importantly to show you the character of this
05:19 7 case and what it's really about. And Mr. Lee's going to come
05:19 8 back to that in a bit.

05:19 9 But you also heard from Mr. Huston this morning about what
05:19 10 a real hypothetical negotiation would look like based on his
05:19 11 experience over 20 years licensing hundreds of agreements at
05:19 12 IBM. And he showed you what you would look at for real-world
05:19 13 data points.

05:19 14 And, Your Honor, I just ask that the public monitors be
05:19 15 turned off for just a minute.

05:19 16 He showed you comparable agreements, which His Honor's
05:19 17 jury instructions have instructed you are significant for this
05:19 18 type of analysis, and it makes just good sense.

05:19 19 If you were buying a house, you'd look for comparable
05:19 20 house prices. If you were buying a car, you'd look for
05:19 21 comparable car prices. It just makes good economic sense to
05:19 22 look at what other prices have been for similar technology.
05:19 23 Mr. Huston took you through many different forms of such
05:20 24 comparable agreements.

05:20 25 Now, he couldn't show you an agreement in which VLSI had

05:20 1 licensed these patents to somebody else because they haven't
05:20 2 done it. No one's paid a penny for these patents or taken a
05:20 3 license from VLSI for them.

05:20 4 So instead he took you through data after data after data,
05:20 5 including sales agreements for the patents themselves. He took
05:20 6 you through comparable agreements between Intel and these
05:20 7 companies that own them. He took you through offers made from
05:20 8 those companies to Intel. He took you through 18 different
05:20 9 comparable agreements that Intel had executed with a variety of
05:20 10 parties, and he showed you what all of this data suggested.

05:20 11 And, Your Honor, we can go back on the public record.

05:20 12 THE COURT: Thank you, sir.

05:20 13 MR. MUELLER: Based on all of this, he suggested that in a
05:20 14 hypothetical negotiation, the appropriate amount of money for
05:20 15 these patents would be \$2.2 million total lump sum,
05:20 16 one-time-only payment, based on reams of comparable agreements.

05:20 17 Mr. Chandler, who took the stand this morning, was called
05:21 18 to rebut him. He looked at hundreds of agreements and couldn't
05:21 19 find one, not one, that he considered comparable. And there's
05:21 20 a good reason for that. What they're seeking in this case is
05:21 21 literally billions of dollars for two patents. He couldn't
05:21 22 find one agreement that would be comparable to that demand. It
05:21 23 just doesn't exist.

05:21 24 No one has ever paid anything remotely like the type of
05:21 25 money that VLSI is seeking for these two patents in the real

05:21 1 world. And as you heard from Mr. Huston, if he'd been at the
05:21 2 negotiating table when someone made that sort of demand, he
05:21 3 would have said no and walked away quickly.

05:21 4 It's an outrageous demand and really it tells you a lot
05:21 5 about the character of the case, as Mr. Lee's going to come
05:21 6 back to in just a bit.

05:21 7 To sum up, at the beginning of this case we told you we
05:21 8 would show you that Intel has never used the '373 patent, and
05:21 9 we have showed you exactly that. The Broadwell and Haswell
05:21 10 processors have multiple different differences -- are different
05:22 11 in multiple ways is a better way to put it from the claims of
05:22 12 the '373 patent. There's no infringement.

05:22 13 We also told you that we would show you that Intel came up
05:22 14 with the ideas in the '759 patent first before that patent was
05:22 15 filed. We showed you that too. Dr. Rotem explained to you how
05:22 16 the Yonah product worked and how it had all of the ideas of the
05:22 17 '759 patent before the '759 patent. The Patent Office didn't
05:22 18 have Yonah. If it had, the patent wouldn't have issued.

05:22 19 And finally Intel kept innovating. 11 years later, the
05:22 20 Lake series processors used a completely different
05:22 21 architecture. Those are what's accused of infringement, but
05:22 22 there is no infringement. Those are fundamentally different
05:22 23 products.

05:22 24 At the end of the evidence, if you look at all of the
05:22 25 facts that you've seen, the truth and the whole truth, you can

05:22 1 see that these are not heros, these are not stars and these are
05:22 2 not infringed.

05:22 3 And that just leaves one question, why are we here? And
05:23 4 I'm going to turn it over to Mr. Lee to answer that question.

05:23 5 MR. LEE: Your Honor, ladies and gentlemen of the jury,
05:23 6 let me join Mr. Chu and Mr. Mueller in thanking you, thanking
05:23 7 the courtroom staff, all the judge's -- the people who work in
05:23 8 the judge's chambers for spending your last week with us. We
05:23 9 greatly appreciate it. You are doing an important public
05:23 10 service.

05:23 11 But let me go to the question that Mr. Mueller asked. If
05:23 12 everything that you now heard is true, why are we here?

05:23 13 Well, we would suggest to you that we know why Intel is
05:24 14 here. As Mr. King told you, Intel is here to defend the work
05:24 15 of its engineers. We know that the engineers took the stand.
05:24 16 They walked right by you. They took the oath. They underwent
05:24 17 cross-examination, and they did the best to describe to you all
05:24 18 of the blood, sweat and tears that went into designing Intel's
05:24 19 products, including the accused features.

05:24 20 Now, there's been a suggestion today that you should
05:24 21 discount that testimony because they work for Intel. Well,
05:24 22 each of you work for folks too. And if you were called to
05:24 23 court and you raised your hand and you swore an oath to tell
05:24 24 the truth, I'm sure that each of you would tell the truth. You
05:24 25 wouldn't lie just because it was your employer.

05:24 1 Sit back and think about what you saw from Dr. Rotem,
05:24 2 Mr. Borkowski, Mr. Douglas. Think about the cross-examination.
05:24 3 Ask yourself whether you can dismiss the testimony the way that
05:25 4 Mr. Chu asked you to.

05:25 5 The reason he's trying to dismiss it is because that
05:25 6 testimony unequivocally demonstrates that we don't infringe.
05:25 7 That's why we are here.

05:25 8 We're here for another reason. Mr. Chu suggested that it
05:25 9 was an excuse that we didn't know about the patents, that we
05:25 10 didn't copy the products. He forgot to tell you that they're
05:25 11 accusing us of willfully infringing these patents. And you
05:25 12 heard His Honor's instructions on willful infringement and
05:25 13 what's required. Well, you now know that the Intel engineers
05:25 14 who designed the products did it without knowledge of either
05:25 15 patent.

05:25 16 I told you in my opening statement that there would not be
05:25 17 a shred of evidence that the Intel folks who designed these
05:25 18 products had heard about these patents, had copied these
05:25 19 patents or did anything other than their own independent work.
05:25 20 That is relevant directly to this claim that we willfully
05:25 21 infringed, and we don't.

05:26 22 As His Honor has told you on several occasions, this case
05:26 23 is important. It is important to Intel for sure. It's
05:26 24 important to VLSI, but it's important to real people like
05:26 25 Mr. Borkowski, Dr. Rotem, Mr. Douglas, who actually did the

05:26 1 work to bring these products to market. And they are here
05:26 2 because when their work is attacked, they defend it. And
05:26 3 they're here because when there are unreasonable litigation
05:26 4 claims in a lawsuit in a federal court seeking unreasonable
05:26 5 damages, it's bad for innovation. It's bad for the economy,
05:26 6 and it's bad for the patent system.

05:26 7 But you don't have to take my word for it. Look at what
05:26 8 Dr. Sullivan said. He said on cross-examination that when
05:26 9 damages are objectively unreasonable, it harms the economy and
05:27 10 it harms the patent system.

05:27 11 To be clear, as Mr. Mueller says, we believe the correct
05:27 12 number is zero.

05:27 13 But the amount that VLSI has asked you to write down this
05:27 14 afternoon is not objectively reasonable. It does not promote
05:27 15 innovation as I just suggested to you. Instead it would tax
05:27 16 the true inventors, the true innovators, the people who
05:27 17 designed the products that came to market and have changed the
05:27 18 lives, changed all of our lives, and the manner in which we
05:27 19 enjoy many aspects of technology.

05:27 20 Now, why is VLSI here? That's a harder question to ask.
05:27 21 And this is where you have to bring your common sense and
05:27 22 collective wisdom to bear, to think about what you've seen in
05:27 23 the last week.

05:27 24 No one from VLSI walked by you, took the oath and got on
05:27 25 the stand. Not the CEO, Mr. Stolarski, who was introduced to

05:28 1 you on the first day of jury selection and who hasn't been here
05:28 2 since. Not Cindy Simpson, who is the chief technology officer,
05:28 3 who just lives up in Austin. No one from VLSI came.

05:28 4 What you know about VLSI is what we elicited on
05:28 5 cross-examination. They don't do any research and development.
05:28 6 They don't make any products. They don't invest in research
05:28 7 and development. They don't make any sales. They don't
05:28 8 generate any revenues. They have done only one thing in their
05:28 9 four and a half years in existence, just one thing. They have
05:28 10 acquired patents and sued Intel without ever giving Intel
05:28 11 notice.

05:28 12 They never picked up the phone and said, we've got these
05:28 13 two stars. We've had them on the shelf for ten years. You're
05:28 14 using them. Come to the table and negotiate with us.

05:28 15 No. They acquired them, and three months later they sued.

05:29 16 Now, VLSI has suggested to you that the only way to
05:29 17 evaluate the importance of their patents, the only way to
05:29 18 evaluate Intel's infringement is to have access to Intel's
05:29 19 confidential information. Well, that's not true. It's not
05:29 20 true for two reasons.

05:29 21 VLSI sued Intel and brought us to this federal court
05:29 22 without any access to our information. They accused us of
05:29 23 infringing without ever having seen a shred of confidential
05:29 24 information. And in the real world, people are negotiating
05:29 25 licenses every day without access to the other parties'

05:29 1 confidential information. That is the way our economy works.

05:29 2 Now, again, let's look at the issue of credibility and
05:29 3 what was promised to you in opening.

05:29 4 VLSI said it teamed up with NXP, but consider what you
05:29 5 learned. Mr. Spehar, the vice president of research and
05:30 6 development of NXP, met the CEO, met the CEO of VLSI that
05:30 7 morning in court. The only other witness from NXP was
05:30 8 Mr. Bearden, one of the named inventors. He had never even
05:30 9 heard of VLSI before this litigation.

05:30 10 Now, in his opening Mr. Chu showed you this cycle of
05:30 11 innovation, and he showed it to you again today. I want to
05:30 12 walk through it very quickly once again. Because again, it
05:30 13 goes to the arguments the parties have made to you and whether
05:30 14 those arguments can be credited and justify enormous -- the
05:30 15 enormous amount that VLSI is claiming.

05:30 16 What you actually know is NXP did not invent either the
05:30 17 '373 or the '759 patent. They were actually patents acquired
05:30 18 from SigmaTel and Freescale. You know that the Patent Office
05:30 19 didn't grant these patents to NXP or VLSI. In fact, you now
05:31 20 know that VLSI has never applied for a patent.

05:31 21 Third, you know that VLSI has never licensed any patents.
05:31 22 Not the '373, not the '759, not any.

05:31 23 And fourth, you now know that not a single dollar has gone
05:31 24 from VLSI to NXP.

05:31 25 All you need to know about the cycle of innovation is it

05:31 1 hasn't happened. Now, some of the witnesses have tried to
05:31 2 suggest to you that, well, if VLSI recovers, if it convinces
05:31 3 you to give them something, NXP will get a share.

05:31 4 Well, all we know about that is it's less than half, and
05:31 5 we know that others, Mr. Stolarski and some others who we don't
05:31 6 know, get the rest.

05:31 7 But the -- in the end, the question for you is not who
05:31 8 gets money because we say none should be awarded, but it is who
05:32 9 is the real innovator based upon what you've heard? Who has
05:32 10 the real innovation cycle? And the answer is it's Intel.

05:32 11 These are not made-up photos. These are photos of what
05:32 12 Intel has actually done. It starts with its scientists
05:32 13 innovating and inventing. That results in thousands of
05:32 14 patents, as you've heard. That results in manufacturing,
05:32 15 including manufacturing billions of products in the United
05:32 16 States that are then sold as real-world products, that generate
05:32 17 money. It's invested in research and development, and the
05:32 18 cycle starts again.

05:32 19 That is a real innovation cycle.

05:32 20 Now, Intel does sell billions of microprocessors. Those
05:32 21 billions of microprocessors come from this innovation cycle.
05:32 22 Intel is proud that it does. But to be clear, those sales of
05:32 23 billions of dollars of processors also make Intel a target when
05:33 24 someone wants to take two patents off the shelf that haven't
05:33 25 been used for ten years and say, we'd like \$2 billion. If you

05:33 1 have been successful as a result of your own innovation cycle,
05:33 2 if you have been, you'll be a target, and that's what's
05:33 3 occurred here.

05:33 4 Now, let me provide you a couple of observations on the
05:33 5 evidence that Mr. Mueller has described to you.

05:33 6 As he said, we have tried to bring you the factual
05:33 7 witnesses, the people who actually did the work, who could
05:33 8 explain to you what they did, why they did it and what the
05:33 9 results were. We wanted you to understand the facts.

05:33 10 What did VLSI do? VLSI has concentrated its closing on
05:33 11 its experts. VLSI invested more than a million dollars in
05:33 12 these experts. Dr. Annavaram was paid hundreds of thousands of
05:34 13 dollars. Dr. Conte, \$180,000. Dr. Sullivan, more than
05:34 14 \$500,000. Dr. Chandler, several hundred thousands of dollars.

05:34 15 Now, these are not independent experts who are coming to
05:34 16 give you a dispassionate opinion. These are people who got
05:34 17 hired to do something and in some cases viewed themselves as
05:34 18 advocates.

05:34 19 But let's look at what the results were of this
05:34 20 investment. This is where VLSI has invested its money. Not in
05:34 21 research and development, not in anything else, but in this
05:34 22 litigation.

05:34 23 Only one person on the face of the earth has ever
05:34 24 suggested that Intel infringes these patents. Only one.
05:34 25 Dr. Conte. He disagrees with Dr. Sylvester. He disagrees with

05:34 1 Dr. Grunwald. He disagrees with Dr. Rotem, Mr. Borkowski and
05:34 2 Mr. Douglas.

05:35 3 Now, Mr. Mueller showed you these slides which summarizes
05:35 4 why Intel doesn't infringe. For each of these key claim
05:35 5 limitations, Dr. Conte disagreed not just with the experts on
05:35 6 the other side, Dr. Sylvester and Dr. Grunwald, but with the
05:35 7 factual witnesses. The people who -- and I ask you to go back
05:35 8 in your own memories and think about the time when they
05:35 9 testified, think about the cross-examination.

05:35 10 Dr. Conte disagreed with Mr. Douglas about whether there
05:35 11 was a minimum operating voltage for C6 SRAM. Dr. Conte
05:35 12 disagreed with Mr. Douglas about RING_RETENTION_VOLTAGE and
05:35 13 whether it was a minimum.

05:35 14 Dr. Conte disagreed with Mr. Douglas on whether the VCCR
05:35 15 provides a regulated voltage during the ramp. And Dr. Conte
05:35 16 disagreed with Dr. Rotem, who actually came up with the
05:36 17 revolutionary idea of Speed Shift, on the question of whether
05:36 18 there were requests.

05:36 19 The one person, the only person who's ever said Intel
05:36 20 infringes, Dr. Conte disagrees with every factual witness who
05:36 21 came, two experts, and with the documents.

05:36 22 And as he admitted on cross-examination, a court of
05:36 23 appeals has said that Dr. Conte, in a prior case, jumped to
05:36 24 conclusions that no reasonable jury could credit. That's what
05:36 25 happened here. He jumped to conclusions that are inconsistent

05:36 1 with the facts as you've heard them.

05:36 2 Now, these disagreements matter. They matter because they
05:36 3 have the burden of proving infringement. They have the burden
05:36 4 of showing entitlement to this enormous amount of money, and
05:36 5 they have the burden of showing you that each and every
05:37 6 limitation is present. And even if one is missing, there's no
05:37 7 infringement.

05:37 8 But the best example that there was an investment in
05:37 9 litigation, not research and development, is Dr. Sullivan.

05:37 10 I'm going to spend a few minutes now, just a few, on
05:37 11 Dr. Sullivan's model because this is what they paid \$500,000
05:37 12 for.

05:37 13 At the same time that Intel was investing in the next
05:37 14 generation of microprocessor, the next one with the smaller
05:37 15 line was, this is what they were investing in.

05:37 16 Now, Dr. Sullivan suggested to you that whether patent
05:37 17 owners ever made use of products themselves was not relevant.
05:37 18 But you now know, having heard His Honor's instructions today,
05:37 19 that's simply not correct. What he told you was correct is
05:37 20 incorrect.

05:37 21 And when you go back and look at the Georgia-Pacific
05:38 22 factors, you remember when His Honor said, "This is the
05:38 23 instruction I don't like reading," that's the one.

05:38 24 If you read that instruction, you will see that what the
05:38 25 patent owner did, whether the patent owner had a product,

05:38 1 whether the patent owner licensed is all relevant to the value
05:38 2 of the patent. And that just makes common sense, as Dr. Conte
05:38 3 conceded on cross-examination.

05:38 4 But Dr. Sullivan did. And the reason he made this
05:38 5 argument to you is two things. He ignored the rules of the
05:38 6 road. He ignored what His Honor has now told you should govern
05:38 7 the question of damages. But he did it for a very simple
05:38 8 reason. It is the only way he could -- it's the only way he
05:38 9 could dismiss all of the real-world evidence. It's the only
05:38 10 way he could dismiss license agreements, purchase transactions,
05:38 11 other events. And instead he came up with this complicated
05:39 12 damages model.

05:39 13 And if I could put on the screen the complicated damages
05:39 14 model, I think, Your Honor, if we could just blank the public
05:39 15 screen.

05:39 16 THE COURT: Yes, sir.

05:39 17 MR. LEE: This is his six-part model. This is how he gets
05:39 18 to his big number. And all you need to know is that if any one
05:39 19 of these is wrong, the number is wrong.

05:39 20 And the second thing that you need to know is that there
05:39 21 were problems at every turn, and every single problem resulted
05:39 22 in inflating the number.

05:39 23 So what do I mean by that? Well, first, Dr. Conte relied
05:39 24 on -- Dr. Sullivan relied upon Dr. Conte who relied upon
05:39 25 Dr. Sullivan -- on Dr. Annavaram. But as you know, if I start

05:39 1 at the upper left-hand corner, Dr. Annavaram had some
05:40 2 limitations, I guess is the best way to put it, on his testing.

05:40 3 He tested some products that were not even accused of
05:40 4 infringement. He measured the wrong features within those
05:40 5 products. And these mistakes all led him to overstating and
05:40 6 inflating his number. But that wasn't the only problem.

05:40 7 We can blank the screen, Mr. Lee.

05:40 8 That wasn't the only problem. He relied upon Dr. Conte
05:40 9 for this one-to-one relationship. Do you remember the
05:40 10 one-to-one relationship? Except that the people who are
05:40 11 actually out there doing the work, Mr. Douglas, Dr. Rotem, they
05:40 12 said that one-to-one relationship isn't a relationship. It's
05:40 13 much more complicated than that, and it depends upon what
05:40 14 you're doing. It depends upon what your use is.

05:40 15 And then Dr. Sullivan put everything into his regression.
05:41 16 But as we heard from Mr. Huston and even Dr. Sullivan himself,
05:41 17 this hedonic regression which I mentioned to you in opening has
05:41 18 never been used in the real world to value a patent.

05:41 19 And if, Mr. Lee, if I could have DDX-20.103 on the screen.

05:41 20 Here are the people who have used hedonic regression to
05:41 21 value a patent, and here are the people who haven't. And yes.
05:41 22 Did we ask every single person who did? Of course, because
05:41 23 without the hedonic regression, there is no damages claim.

05:41 24 At each one of these places, Dr. Annavaram's limited
05:41 25 testing, Dr. Conte's assumption about ratios, the use of

05:41 1 hedonic regression that hasn't been used in any other context,
05:41 2 in every step decisions were made that resulted in inflating
05:42 3 the number.

05:42 4 And that, at the end of the day, is what resulted in a
05:42 5 damages claim for a hypothetical license that has no tie to
05:42 6 anything else that has ever occurred in the real world. It
05:42 7 results in a number that -- if I could have 106, Mr. Lee --
05:42 8 Dr. Sullivan himself describes as astronomical.

05:42 9 Now, I think VLSI is suggesting that, well, you didn't do
05:42 10 your own testing. That argument really misses the mark for
05:42 11 three reasons.

05:42 12 First, the models were wrong. The assumptions were wrong.
05:42 13 The data was wrong. There was no reason for us to take the
05:42 14 wrong models, the wrong data, the wrong assumptions and try to
05:42 15 run them again to get to the wrong result. It would make no
05:42 16 sense to do that.

05:42 17 Second, and this is critically important, the testing was
05:43 18 a testing of what Intel's products do, not what the patents do.
05:43 19 Have you seen a single test from Freescale -- from SigmaTel,
05:43 20 Freescale or NXP that shows the benefits of the patents? No.
05:43 21 All you've seen is testing that shows the benefits, according
05:43 22 to them, of what Intel's products do.

05:43 23 And, third, that is the reason why there is no
05:43 24 relationship between what happened in the real world and this
05:43 25 number that Dr. Sullivan has given to you. It's the reason

05:43 1 that Mr. Chandler, the last witness who got on the stand and
05:43 2 who has years licensing, was not asked to give you a reasonable
05:43 3 royalty opinion because he couldn't give you one that would be
05:43 4 even in the same universe as what Dr. Sullivan came up with.

05:44 5 Now, as I mentioned in my opening, I've been trying cases
05:44 6 for 45 years. I've learned that in a trial like this, if the
05:44 7 facts support you, you show up. You have witnesses get on the
05:44 8 stand. They take the oath. You defend yourself, and you stay
05:44 9 till the very end.

05:44 10 I've also learned that if you make a serious accusation
05:44 11 and you're asking for lots of money, you stand up and you prove
05:44 12 it.

05:44 13 No one from VLSI has come here. Not a single person.
05:44 14 They're asking you for billions of dollars and no one even
05:44 15 bothered to come. No one took the oath. No one underwent
05:44 16 cross-examination. No one let us ask them, what do you do?
05:44 17 How do you do it? What do you invest in? Where's the money
05:44 18 going? Where's it coming from?

05:44 19 But you know who did get on the stand? You know who did
05:44 20 show up? The Intel engineers. The Intel engineers came here,
05:45 21 got on the stand, testified in cross-examination. They weren't
05:45 22 afraid. They didn't run from the task. They didn't lie. Just
05:45 23 as every single one of you would, they stood up for their work.

05:45 24 And I'd like to ask them, to remind you, to stand up just
05:45 25 once more so you can be reminded that they stayed here till the

05:45 1 end with you. In a courtroom where VLSI hasn't been here since
05:45 2 jury selection, hasn't got on the stand, these folks stayed
05:45 3 till the end.

05:45 4 And they stayed here till the end because they told you
05:45 5 the truth. Because the attack on their credibility is a
05:45 6 fabrication, and because they are the people who have designed
05:45 7 and built and brought to market the products that you are using
05:45 8 every day.

05:45 9 When you go back to the jury room, we ask you to find just
05:46 10 what Mr. Mueller said. I said at the outset, it seems like a
05:46 11 long time ago, I know you feel like you've been drinking
05:46 12 technology from a firehose, but I said the case was actually
05:46 13 straightforward. We've never used the '373 patent.

05:46 14 For the '759 patent, we actually did it first. There is
05:46 15 no dispute about that. As you heard today, everybody concedes
05:46 16 we did it first. Ten years later, we did something different
05:46 17 Speed Shift, and it doesn't infringe.

05:46 18 Ladies and gentlemen, this is our last chance to address
05:46 19 you. Mr. Chu gets one last chance, and we don't get a chance
05:46 20 to come back. It's got to stop at someplace.

05:46 21 I ask you just this favor. When you go back to the jury
05:46 22 room, if there's something Mr. Chu says that I can't respond to
05:46 23 now, but you know, having been with us for a week, how we would
05:46 24 respond, when that comes up, I would just ask you to raise your
05:47 25 hand and say, yeah, VLSI said this, but I think Intel would

05:47 1 have responded this way. That is the fair way to resolve
05:47 2 things. Intel did not bring this --

05:47 3 THE COURT: Mr. Lee. You guys, you can sit down.

05:47 4 MR. LEE: Sorry. They're here, they're standing.

05:47 5 Ladies and gentlemen, Intel did not bring this lawsuit.
05:47 6 We're here because we had to be. We're here because we make
05:47 7 billions of sales of microprocessors. We're here because it
05:47 8 makes us a target. And we're here to defend ourselves.

05:47 9 I ask you just this: Return Intel to the marketplace
05:47 10 where it can compete on innovation, invention and products
05:47 11 rather than in the courtroom. Let Intel do what it did for the
05:48 12 ten years when these two patents were sitting on the shelf not
05:48 13 being used by anyone, making inventions, pursuing a real cycle
05:48 14 of innovation.

05:48 15 If you think about this case in that context, if you bring
05:48 16 your collective wisdom and common judgment to bear, if you
05:48 17 think about the real credibility of witnesses, not little
05:48 18 snippets of testimony that lawyers get after 45 minutes of
05:48 19 forcing witnesses into yes or no answers, you'll know the
05:48 20 correct answer. Thank you very much.

05:48 21 CLOSING ARGUMENT ON BEHALF OF THE DEFENDANT

05:48 22 MR. CHU: I want to talk about witnesses first and other
05:49 23 evidence. And then I want to talk about the regression
05:49 24 analysis.

05:49 25 Contrary to what Intel's counsel said, there were

05:50 1 witnesses from Intel who agreed 100 percent with Professor
05:50 2 Conte on some key issues. I showed some of that earlier this
05:50 3 afternoon. Some of those fact witnesses from Intel disagreed
05:50 4 100 percent from some of the Intel expert witnesses on key
05:50 5 facts on the prior art as well as on key facts about
05:50 6 infringement.

05:50 7 In addition, there were key Intel documents that showed
05:50 8 how the products operated. And despite the fact that some of
05:50 9 the Intel expert witnesses tried to disagree with those
05:50 10 documents, they couldn't and when confronted on
05:50 11 cross-examination had to agree that the documents were
05:51 12 accurate.

05:51 13 One other thing about electronic products like this, you
05:51 14 have heard the phrase "source code" or "P-code." These are the
05:51 15 detailed computer instructions that tell the products how to
05:51 16 operate.

05:51 17 Dr. Conte testified extensively, he would say, here's how
05:51 18 they operate. And frequently not any Intel employ or an expert
05:51 19 witness on the other side said, I read that source code and it
05:51 20 operated differently. Because he can't do that.

05:51 21 The source code prescribes exactly how the products are
05:51 22 operating. You will remember how extensively Professor Conte
05:51 23 would discuss the source code. So there were Intel fact
05:52 24 witnesses who agreed and -- with Dr. Conte, and disagreed with
05:52 25 Intel expert witnesses, and there were key documents including

05:52 1 the source code that supported Dr. Conte.

05:52 2 Next on the regression analysis. There's no dispute that
05:52 3 it's a well-used technique. There's no dispute that some Nobel
05:52 4 prizes have been awarded in connection with using regression
05:52 5 analysis. There's no dispute that major corporations and
05:52 6 government agencies use it for many different purposes.

05:52 7 It cannot be used in normal license negotiations because
05:52 8 you need information from both sides, and normally people don't
05:52 9 exchange that information. And you heard testimony about that
05:53 10 from Dr. Sullivan. There was no dispute about it.

05:53 11 But he also said that there are situations in license
05:53 12 negotiations where both sides do have the information and,
05:53 13 therefore, they can use the regression analysis. And for
05:53 14 dozens and dozens of clients, he has personally been involved
05:53 15 in using the regression analysis.

05:53 16 One other part about the expert witnesses. Both sides had
05:53 17 expert witnesses. Both sides, you heard testimony that they
05:53 18 were paid a certain amount and the hourly rates. And if the
05:53 19 point of opposing counsel was it's an expensive process, I
05:53 20 guess they were trying to say it's just an expensive process
05:53 21 one way. Both sides had numbers of expert witnesses, and there
05:53 22 isn't much choice but to go through that particular process.

05:54 23 Now, there were comments made about Mr. Stolarski. He was
05:54 24 required --

05:54 25 MR. LEE: Your Honor, I object to this.

05:54 1 MR. CHU: There was testimony that he was required to --

05:54 2 MR. LEE: Your Honor, I object to this. I raised this to
05:54 3 Your Honor specifically.

05:54 4 MR. CHU: I don't know what the objection was.

05:54 5 Mr. Chandler --

05:54 6 THE COURT: Mr. Lee, I don't remember you raising this.

05:54 7 MR. LEE: I raised it at the conference -- (inaudible.)

05:54 8 THE REPORTER: I can barely hear you.

05:54 9 MR. LEE: I'm sorry.

05:54 10 THE COURT: I don't recall. I do not recall us raising
05:54 11 this.

05:54 12 MR. LEE: I raised specifically the question of whether
05:54 13 there could be something said about where he was and what he's
05:54 14 been doing, where we had no idea what it was. And that's
05:54 15 exactly what's on the slide now.

05:54 16 THE COURT: Let take the slide down, Mr. Chu.

05:55 17 MR. CHU: I'm going to go forward, but I'm going to stay
05:55 18 on some of the other aspects about Mr. Stolarski.

05:55 19 THE COURT: You're welcome to.

05:55 20 MR. CHU: Yes. Counsel for Intel made it out as if he
05:55 21 wasn't willing to testify under oath. They took his deposition
05:55 22 for two full days under oath. They were able to, if they
05:55 23 wanted to, play any or all of that deposition testimony, and
05:55 24 it's considered as much weight as if he was testifying in a
05:55 25 court of law.

05:55 1 And we also know that even though he is at home, he is
05:55 2 watching this proceeding, as many, many other people are.

05:55 3 You heard some comments about Professor Conte, and it was
05:56 4 also brought out during the course of this trial that he had
05:56 5 testified for USAA, which is based in San Antonio in two cases
05:56 6 against Wells Fargo for patent infringement.

05:56 7 They're cases that were tried here in Texas, actually not
05:56 8 too far from this particular courthouse. And all of the USAA
05:56 9 patents were found valid and infringed, and there was a jury
05:56 10 verdict in the hundreds of millions of dollars.

05:56 11 Let's look at some of the evidence on '759. Intel has the
05:56 12 burden of proving patent invalidity by clear and convincing
05:56 13 evidence.

05:56 14 The preponderance is where the scales of justice are very
05:56 15 closely, evenly balanced. If it tilts slightly in favor of the
05:56 16 party with the burden by the preponderance, then you can
05:56 17 rightfully find for that person. That is the burden of proof
05:57 18 on VLSI to prove infringement.

05:57 19 A peppercorn more of weight is sufficient. That's very
05:57 20 different from a criminal case.

05:57 21 To prove invalidity, it must be by clear and convincing
05:57 22 evidence, so clear, direct, weighty and convincing as to enable
05:57 23 you to come to a clear conviction without hesitancy that the
05:57 24 patent is invalid.

05:57 25 Also as a part of the law there is a presumption of

05:57 1 validity. A patent is presumed valid and one of the flaws of
05:57 2 one of the experts presented by Intel is the following.
05:57 3 Dr. Grunwald was asked today, "You did not presume validity or
05:57 4 invalidity of the '759 patent when you were working on your
05:57 5 expert report," and he said, "I don't think I can answer that,"
05:57 6 which was a common place that he hid when he didn't want to
05:58 7 answer a question.

05:58 8 The Patent Office knew about Yonah's SpeedStep technology.
05:58 9 The evidence was SpeedStep was before in this Pentium III and
05:58 10 the evidence is that SpeedStep, the technology controlling the
05:58 11 speed of the cores, was the same throughout the different
05:58 12 product lines that use SpeedStep and it worked the same way in
05:58 13 a one-core product, two-core product or four-core product. So
05:58 14 the Patent Office did, in fact, have that SpeedStep technology
05:58 15 before it.

05:58 16 The Patent Office, therefore, knew about the Yonah
05:58 17 SpeedStep because it was the same that was in the Pentium and
05:58 18 other products.

05:58 19 Now, here's an example. It's not as if every fact and
05:59 20 expert witness in this case were opposed to Professor Conte.
05:59 21 Dr. Grunwald said the Yonah processor -- was asked, the Yonah
05:59 22 processor did not have a hardware controller on it. Would you
05:59 23 agree with that? Yes or no.

05:59 24 He said no, very clearly.

05:59 25 And then we asked him questions about Dr. Rotem's

05:59 1 testimony. "The Yonah processor did not have a controller?"

05:59 2 Answer: "It did not have a hardware controller."

05:59 3 It goes to the credibility of the Intel defense when their
05:59 4 hired expert disagrees with an Intel fact witness on a key
05:59 5 point.

05:59 6 Question: "You would agree that Dr. Rotem when he was
05:59 7 answering these questions knew more about Yonah than you? He
05:59 8 designed it?"

05:59 9 "Yes.

05:59 10 "Just to clarify, these were statements by Dr. Rotem about
06:00 11 Yonah and you disagree with both of those statements by
06:00 12 Dr. Rotem?"

06:00 13 Dr. Grunwald said, "Yes."

06:00 14 It's a question of credibility and you can judge it in
06:00 15 black and white here.

06:00 16 What has a programmable controller? The evidence clearly
06:00 17 showed, it's described in the '759 patent. It's in the Lake
06:00 18 products and it was not in Yonah, which is why it cannot
06:00 19 possibly invalidate the '759 patent.

06:00 20 Intel tried to make it out as if the '759 patent was old
06:00 21 and tried to make it out as if it's as old as the old Netflix
06:00 22 mail-you-a-movie-at-your-request.

06:00 23 But when confronted with the evidence, Dr. Grunwald had to
06:00 24 admit that it wasn't old, given the fact that Mr. Henson's
06:01 25 invention would permit speed changes a million times a second.

06:01 1 And he wrote that not only in the specification of the patent
06:01 2 but in the claims of the patent itself. Claim 4 in particular.

06:01 3 The experts actually agreed on some facts, such as the
06:01 4 '759 patent is not limited to MP3 players.

06:01 5 Here's some more evidence on the '373 patent. At first
06:01 6 Dr. Sylvester was asked, "Did you find anything in the Intel
06:01 7 documents that referred to minimum retention voltage for the C6
06:01 8 SRAM?"

06:01 9 "No."

06:01 10 And then we showed him this document for both Broadwell as
06:01 11 well as Haswell that had the Vmin. Again, these are Intel
06:01 12 documents, not created for the purpose of litigation.

06:01 13 Voltage is used during ramp-ups and ramp-downs.

06:02 14 Dr. Sylvester testified as follows:

06:02 15 Question. "And is the VCCR supplying a reliable voltage
06:02 16 during that ramp-down period?"

06:02 17 Answer: "No."

06:02 18 But Mr. Douglas, the Intel employee was asked, Question:
06:02 19 "Intel's ramp controller circuitry makes sure that the voltage
06:02 20 is ramped up and down at rates especially chosen by Intel,
06:02 21 correct?"

06:02 22 And he said, "Yes. At rates chosen by Intel."

06:02 23 Again, a direct contradiction between Dr. Sylvester and
06:02 24 Mr. Douglas. It's a question of credibility.

06:02 25 And there is the question about damages.

06:02 1 You've heard the instruction in the evidence about the
06:03 2 hypothetical negotiation. In the real world, no one has
06:03 3 decided that the patents are valid and infringed, but that's
06:03 4 what the assumption is in the hypothetical negotiation.

06:03 5 You heard evidence about other patents from Mr. Huston,
06:03 6 but he had to admit he had zero evidence that any of those
06:03 7 patents were used by Intel in any Intel product.

06:03 8 Well, of course the amounts paid for those licenses are
06:03 9 very low because Intel wasn't getting any advantage or use of
06:03 10 those patents.

06:03 11 There was other evidence about sales and mergers of the
06:03 12 various companies that had owned the '373 and '759 patent. But
06:03 13 they have no relationship to Intel and Intel's use, which is
06:04 14 the touchstone for damages.

06:04 15 This is a chart that Mr. Huston on the left had shown all
06:04 16 of these small, small licenses, but here on the right side are
06:04 17 other Intel licenses.

06:04 18 Here's Mr. Huston agreeing that he didn't assess whether
06:04 19 those license agreements for the small amounts involved
06:04 20 situations where Intel actually practiced any of those
06:04 21 inventions.

06:04 22 You did hear from Adam King, the first Intel employee, who
06:04 23 said there are thousands of different features. And he said,
06:04 24 "I want to tell you about one, it's called hyperthreading,"
06:04 25 suggesting that this was technology that was created by Intel.

06:04 1 The fact is that Intel paid MicroUnity \$300 million to
06:05 2 resolve a patent litigation of MicroUnity's hyperthreading
06:05 3 innovations.

06:05 4 Intel also paid \$1.5 billion to Nvidia for a license to
06:05 5 their patents, and it was a cross-license between the two
06:05 6 companies. So Nvidia received a license to a very large number
06:05 7 of the Intel patents and Intel, the much larger dominant
06:05 8 company, had to --

06:05 9 MR. LEE: Your Honor, the last two slides are all material
06:05 10 that's under seal, has been under seal the entire trial.

06:05 11 MR. CHU: No. That's not so. The MicroUnity situation
06:05 12 was published in the New York Times.

06:05 13 MR. LEE: I'm talking about the amounts that he's put up
06:05 14 of these noncomparable licenses.

06:05 15 THE COURT: Let's take the slides down. But you're
06:06 16 welcome and not -- the jury's heard whatever the numbers are.

06:06 17 MR. CHU: Okay.

06:06 18 Mr. Huston had worked for IBM. And he testified that they
06:06 19 had this policy. Someone wants a license for one patent, it's
06:06 20 1 percent. Two patents, it's 2 percent up to 5 percent.

06:06 21 He was asked, "You understand that IBM's 1 percent running
06:06 22 royalty would result in more damages than Dr. Sullivan is
06:06 23 proposing, right?"

06:06 24 And he answered "Yes."

06:06 25 There are two patents in this case. He was asked, what if

06:06 1 it was just the 1 percent for one patent, and that gives you
06:06 2 some idea about the reasonable royalty in this case.

06:07 3 It was a clear admission by him earlier today.

06:07 4 Real-world facts. Intel has made this very large number
06:07 5 of dollars from infringing the '759 and '373 patents. And this
06:07 6 is Intel projecting that same technology that is infringing to
06:07 7 the world at large, trumpeting its importance.

06:07 8 And here, too, is further Intel statements to the public
06:07 9 about the revolutionary approach that uses the VLSI patented
06:07 10 technology. And here's more Intel trumpeting this as a key
06:07 11 feature for the nearly billion in infringing products sold.

06:07 12 You heard testimony from Mr. Spehar about Innography.
06:07 13 They are an independent company. And they rate the quality of
06:08 14 patents. Many companies subscribe to this and use it and rely
06:08 15 upon it, and the two patents in this case score in the top ten
06:08 16 percentile of patents.

06:08 17 Now, Mr. Spehar was asked about if there were moneys
06:08 18 generated from this lawsuit, where do the moneys go?

06:08 19 It was brought out on cross-examination. These were not
06:08 20 questions that we asked, but it was Intel's counsel.

06:08 21 Question: "O you know if anyone else other than NXP
06:08 22 stands to benefit?

06:08 23 Answer: "Here is like teachers' unions. It's like
06:08 24 pension funds. Texas A&M has a vested stake too."

06:08 25 I'm going to look at the verdict form and you'll have it

06:09 1 of course in the jury room.

06:09 2 The first question asks about literal infringement of the
06:09 3 '373 patent. The decision is yours and yours alone. We hope
06:09 4 you do find that there's infringement of each of the claims.

06:09 5 Question 2 asks about literal infringement of the '759
06:09 6 patent. And, again, we hope, but it's your decision, that you
06:09 7 do find infringement.

06:09 8 Question 3 asks only if you answered no to the earlier
06:09 9 question, you should fill out Question 3 and Doctrine of
06:09 10 Equivalents. If you've answered there's infringement, then you
06:09 11 should skip this Question 3 as the instructions state.

06:09 12 Question 4 asks about willful infringement. And you heard
06:10 13 testimony along the following lines from an Intel engineer that
06:10 14 they're discouraged from looking at patents.

06:10 15 And the reason why they're discouraged is they want to be
06:10 16 able to say everything is done independently, but they do read
06:10 17 articles and publications that may mirror the same technology
06:10 18 that is described in patents which are publicly available and
06:10 19 that any engineer or any other person with a few key strokes in
06:10 20 30 seconds of time can find the relevant patents.

06:10 21 And His Honor provided an instruction that there can be
06:10 22 willful infringement by willful blindness. So if, for example,
06:10 23 engineers are told, oh, don't go looking at patents so you can
06:11 24 say that's what you've been told. You're like an ostrich
06:11 25 putting your head in the ground, and willful blindness is

06:11 1 sufficient for a finding of willful infringement.

06:11 2 Question 5 has to do with the validity of the '759 patent.

06:11 3 We hope you agree and the evidence supports that the '759

06:11 4 patent is valid and, therefore, this question should be

06:11 5 answered no, in favor of VLSI.

06:11 6 Question 6 asks for damages in connection with the '373

06:11 7 patent. I think you've seen the number during the course of

06:11 8 trial and earlier this afternoon in closing argument. That's

06:11 9 the very specific number you were given earlier.

06:11 10 Question 7 asks about damages for the '759 patent, and,

06:11 11 again, this is a number that you've seen earlier. Now, there's

06:12 12 a question about whether your amount of damages is based on a

06:12 13 running royalty for past sales, and here's a very important

06:12 14 fact that you should know about that not much time was spent

06:12 15 on.

06:12 16 The damages period for this trial ended more than a year

06:12 17 ago. So Intel stopped giving VLSI and its lawyers --

06:12 18 MR. LEE: Your Honor, I object. We didn't stop giving

06:12 19 anything.

06:12 20 THE COURT: Mr. Chu.

06:12 21 MR. CHU: I'm talking about the damages period.

06:12 22 THE COURT: Let's wrap up.

06:12 23 MR. CHU: Sure. Sure.

06:12 24 Here's Question 8. Is the total amount of damages you

06:12 25 found in Questions 6 and 7 a running royalty in the form of a

06:12 1 lump sum for past damages only or a lump sum for all damages?

06:12 2 You did hear testimony that the financial information for
06:13 3 damages was cut off as of December 31, 2019 and, therefore, we
06:13 4 suggest that the proper answer is No. 1, a running royalty in
06:13 5 the form of a lump sum for past damages only as per that date
06:13 6 that I mentioned as opposed to the second choice.

06:13 7 Now, I want to share a few closing thoughts with you.

06:13 8 You've heard His Honor say that this trial is being
06:13 9 broadcast. And many, many people who aren't in the courtroom
06:13 10 because of safety protections are watching every day.

06:13 11 The decision you make is important. It is important for
06:13 12 the parties in this case, Intel and VLSI. But it's important
06:14 13 for our innovation economy.

06:14 14 It's important for the encouragement of innovation and new
06:14 15 inventions. You've heard how long it's taken us to get here,
06:14 16 and you've heard a lot of evidence about the work that needed
06:14 17 to be done.

06:14 18 When you go into the jury room, your verdict can send a
06:14 19 message that companies that use the technology of others
06:14 20 recognized by the United States Patent Office should entitle
06:14 21 those patent owners to a reasonable royalty, no more, no less.
06:14 22 Through that you will be sending a strong signal that you
06:15 23 support the innovation economy in creating the right incentives
06:15 24 and set a balance that keeps our economy strong.

06:15 25 You've been absolutely magnificent as jurors. You've

06:15 1 listened to all witnesses and both sides. And for that, I
06:15 2 thank you very much.

06:15 3 THE COURT: Thank you, Mr. Chu.

06:15 4 Ladies and gentlemen, given the hour, I don't expect for
06:15 5 you all to begin deliberating tonight.

06:15 6 One of the things we have to do is get the exhibits to
06:15 7 you. We're in an odd situation because of the pandemic where
06:15 8 we've done our best to get exhibits formatted so that they are
06:15 9 electronic. But because we had trial today, there are a number
06:16 10 of exhibits that came in today that we're not going to be able
06:16 11 to get into electronic format for you all to have to begin with
06:16 12 tomorrow.

06:16 13 So you are going to have some of the exhibits, most of the
06:16 14 exhibits that have come in in the trial in electronic format.
06:16 15 Others will be in paper format, which is analog digital. It's
06:16 16 like when I was a lawyer what we just had.

06:16 17 I want to make it clear to you that it doesn't -- in the
06:16 18 same way, live testimony is the same as testimony you might see
06:16 19 in a different format. There's no difference in whether you
06:16 20 should believe or disbelieve anything that is in an exhibit
06:16 21 just because of the format.

06:16 22 The formatting, we just are saving a day by not taking the
06:16 23 paper and putting it into, you know, electronic format. So
06:16 24 with that being said, I have again lied to you. You cannot
06:17 25 discuss this case amongst yourselves, despite me twice having

06:17 1 said that I wouldn't say that again.

06:17 2 But this is very important. Couple of things. One, let
06:17 3 me echo what both counsel said, three counsel said, I
06:17 4 apologize, that you all have been magnificent throughout this
06:17 5 entire process. There can be no doubt about that.

06:17 6 Second, you have one more evening, at least, where you
06:17 7 can't look or read or do anything, find out anything about the
06:17 8 case because you're about to begin to deliberate.

06:17 9 You can't talk about the case, even though it's over. You
06:17 10 cannot yet begin to talk about the case with each other. You
06:17 11 cannot begin to talk until you get together tomorrow at 9:00,
06:17 12 and at 9:00 you will -- the very first thing you have to do is
06:17 13 what? Pick the foreperson.

06:18 14 And you pick the foreperson. You'll give the note to
06:18 15 William or to I think whoever's sitting out monitoring you all,
06:18 16 making sure, sitting outside. You'll give the note. We'll
06:18 17 say -- I'll tell everyone who the foreperson is, and at that
06:18 18 point you can begin your deliberations.

06:18 19 And from there on, it's all up to you in terms of timing.
06:18 20 I very, very, very much appreciate it.

06:18 21 Let me say one more time also, because tomorrow you're
06:18 22 going to go straight to where you deliberate and I won't see
06:18 23 you. This -- these lawyers and everyone were as fine as I've
06:18 24 ever seen since 1984 when I got out of law school.

06:18 25 This was truly the way trials should be conducted. I

06:18 1 compliment all of the attorneys and all of their staff. You've
06:18 2 seen their staff quietly walking around trying to make sure we
06:18 3 keep the trains running, but this is -- if every trial were
06:19 4 like this, I would probably have to work for free.

06:19 5 So it was -- they did a great job. You all have done a
06:19 6 great job of paying attention. I will dismiss you at this
06:19 7 point. I look forward to having you back tomorrow morning at
06:19 8 9:00. Go straight to the other courtroom where you'll be
06:19 9 deliberating and pick a foreperson and we'll go from there. So
06:19 10 have a very good evening.

06:19 11 THE BAILIFF: All rise.

06:19 12 (Jury exited the courtroom at 6:19.)

06:19 13 THE COURT: Mr. Lee?

06:20 14 MR. LEE: Your Honor, if I could, principally for the
06:20 15 record, first, I would ask you to have both parties lodge with
06:20 16 the Court the demonstratives they used during the closing
06:20 17 and --

06:20 18 THE COURT: That will be granted.

06:20 19 MR. LEE: I'm going to renew two objections, which I'm
06:20 20 sure Your Honor is going to overrule, but I think I need to do
06:20 21 it for the appellate record.

06:20 22 The first is the slides that they used with these
06:20 23 noncomparable licenses, the 1.5 billion, 300 million, they
06:20 24 didn't use those as informative. They used those to justify
06:20 25 their royalty rate. And that is exactly the opposite of what

06:20 1 you're entitled to do. It's the argument we had with Your
06:20 2 Honor --

06:20 3 THE COURT: Mr. Lee, what do you want me to do?

06:20 4 MR. LEE: I don't think there's anything to do now, but I
06:20 5 think I have to just renew the objection. And I don't think
06:20 6 there's anything for you to do now.

06:20 7 THE COURT: Well, you can, but I'm not sure what the point
06:20 8 of you renewing an objection is now. You objected during
06:20 9 closing, and I sustained what you said during the closing. And
06:20 10 I'm -- unless you're inviting -- you're -- you can say whatever
06:20 11 you'd like, but unless you're asking me to go back and do
06:21 12 something with the jury --

06:21 13 MR. LEE: No. We're definitely not. But, you know, I've
06:21 14 seen -- there have been enough occasions where someone has
06:21 15 said, well, you should have something, you waived it.

06:21 16 And the second just is that slide with Texas A&M, you
06:21 17 know, Your Honor, Texas A&M is an investor in a Fortress Fund.
06:21 18 That question wasn't asked directly on cross. It was blurted
06:21 19 out. And now it's --

06:21 20 THE COURT: Well, I get that, but your person invited it.
06:21 21 And I think what happened there was -- this is my impression,
06:21 22 but I'll put on the record since you are. My impression was
06:21 23 that whoever decided to ask that question got an answer from
06:21 24 someone who really didn't know what they were saying and
06:21 25 probably shouldn't have asked that question.

06:21 1 MR. LEE: Your Honor, I actually agree with the first
06:21 2 part. I don't know if I agree with the second.

06:21 3 THE COURT: I'm saying -- let me say, I would not have
06:21 4 asked the question if I wasn't sure what the witness was going
06:21 5 to say. And in that case I think that he was trying to get
06:21 6 something out of the witness, and he got an answer that was
06:22 7 unfavorable to Intel, was the way I took it.

06:22 8 MR. LEE: Your Honor, just the second objection to renew
06:22 9 is allowing that argument to occur in closing when we weren't
06:22 10 allowed to explore Fortress, which owns the fund that Texas A&M
06:22 11 invests in. That's the second objection.

06:22 12 THE COURT: But I didn't allow that. I mean, Mr. Chu said
06:22 13 it. If you had objected, I would have -- in fact, I turned my
06:22 14 head to see. I've got to learn to stop. I have this habit of,
06:22 15 when I think something is objectionable, I instinctively turn
06:22 16 my head to see if someone's going to stand up. And I actually
06:22 17 thought that there might be an objection at that point. And
06:22 18 had there been one, I would have done something about it at
06:22 19 that time.

06:22 20 MR. LEE: Well, I didn't object because, as Your Honor
06:22 21 told us earlier, if it was in the record, it's in the record.

06:22 22 THE COURT: Well, but I understand.

06:22 23 MR. LEE: I think I've done all that I have to do now.
06:22 24 And as Your Honor says, we're not asking you to do anything at
06:22 25 this moment. We may at some point.

06:22 1 THE COURT: I understand. And -- but, Mr. Lee, and let me
06:22 2 put on the record, thank you. And you are free to -- I know
06:23 3 you've got to skedaddle, so I know you won't be here tomorrow.

06:23 4 MR. LEE: No. Thank you, Your Honor. Thank you for two
06:23 5 things. One is thank you for getting me off to this other
06:23 6 hearing and accommodating that. And thank you for all the
06:23 7 courtesies to everybody for the last week.

06:23 8 As I said to Suzanne and Kristie, everybody's been as
06:23 9 hospitable as they could be, and we may even come back in
06:23 10 April.

06:23 11 (Laughter.)

06:23 12 THE COURT: I understand.

06:23 13 Yes, sir, Mr. Chu.

06:23 14 MR. CHU: Two things. In some jurisdictions, even when
06:23 15 lawyers have objected to jury instructions before they were
06:23 16 read, as was done here, in some jurisdictions the practice is
06:23 17 to object after the reading, so I just want the record to be
06:23 18 clear that we renew the objections that we had already put on
06:23 19 the record with respect to jury instructions.

06:23 20 And second, of course, we also thank not only Your Honor,
06:23 21 but all of your staff who are in the courtroom and everyone in
06:24 22 the courthouse, from the security people and others. They've
06:24 23 been very accommodating to our entire staffs, on both sides, to
06:24 24 allow us to make things happen when the courthouse was closed
06:24 25 so we can move documents in here, get things wired up, and I've

06:24 1 got some magnificent restaurant recommendations for barbecue
06:24 2 and other things, particularly from some of the security
06:24 3 officers, and I look forward to trying those restaurants.

06:24 4 THE COURT: Well, let me wrap up by saying this, and I've
06:24 5 said this a couple times: I could not have hoped -- when I
06:24 6 came into this, I could not have told you all how well I
06:24 7 thought you all would do. I thought this would be exceptional
06:24 8 at every level. And yet you all exceeded what I had
06:25 9 anticipated happening. Whether it was on opening or closing
06:25 10 or -- you noticed I did not stop you all from talking, even
06:25 11 though you both abused me by going too long. That was -- I
06:25 12 just decided I wasn't going to say anything. Don't think I
06:25 13 didn't know it.

06:25 14 But I just wanted you -- and -- but the lawyers were
06:25 15 exceptional in terms of their examinations, in terms of
06:25 16 presenting issues to me. You all made it, I've told people,
06:25 17 very difficult but in a very good way because the issues you
06:25 18 presented often were tough issues. But you did such a great
06:25 19 job on both sides arguing them, that's what made it tough. Not
06:25 20 the normal toughness where sometimes lawyers don't really know
06:25 21 what they're doing and that's a different thing to deal with.

06:25 22 So I very much appreciate everything that has happened
06:25 23 over the past six days. And I know we've got more time
06:26 24 together coming in a couple months. I'm in many ways happier
06:26 25 about that probably than some of you all are. But I look

06:26 1 forward to seeing you.

06:26 2 Again, Mr. Lee, Godspeed to you, wherever it is you're
06:26 3 headed.

06:26 4 MR. LEE: Thank you, Your Honor.

06:26 5 THE COURT: And, Mr. Chu, if you are staying here through
06:26 6 the -- for the jury verdict, I won't say adieu to you yet. We
06:26 7 will be here tomorrow at 9:00 -- actually, I'm sorry. I need
06:26 8 you all here at 8:30, right? I need at least one or two of you
06:26 9 here at 8:30 to resolve exhibit issues so we can make sure that
06:26 10 by 9:00 the jurors have all the exhibits.

06:26 11 So I -- we'll take that up at 8:30 tomorrow. Not everyone
06:26 12 has to be here, but someone needs to be here for each side.
06:26 13 We'll get the exhibit issues resolved. The jury will have it
06:26 14 at 9:00. I need again at least a couple of people here shortly
06:27 15 after 9:00 because I'll tell you all who the foreperson is.

06:27 16 And then what I really need from that time on is
06:27 17 someone -- a person from each side so that when -- if we get a
06:27 18 note we can quickly assemble and I can quickly tell you all --
06:27 19 I'll ask you what you'd like me to do, and then I can get a
06:27 20 response to the jury as quickly as possible. So at least a
06:27 21 couple of people will need to be available to help me with the
06:27 22 notes.

06:27 23 Again, have a good evening. It was a tremendous trial.
06:27 24 Everyone should be proud of what they did, and I will see you
06:27 25 tomorrow morning.

06:27 1 THE BAILIFF: All rise.

06:27 2 (Hearing adjourned at 6:27 p.m.)

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1 UNITED STATES DISTRICT COURT)
2 WESTERN DISTRICT OF TEXAS)
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4 I, Kristie M. Davis, Official Court Reporter for the
5 United States District Court, Western District of Texas, do
6 certify that the foregoing is a correct transcript from the
7 record of proceedings in the above-entitled matter.

8 I certify that the transcript fees and format comply with
9 those prescribed by the Court and Judicial Conference of the
10 United States.

11 Certified to by me this 8th day of March 2021.

12
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